

MANUFACTURERS' RECORD

A
WEEKLY SOUTHERN INDUSTRIAL
RAILROAD AND FINANCIAL NEWSPAPER.

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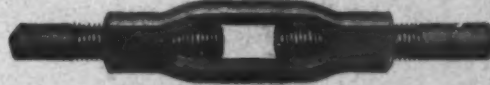
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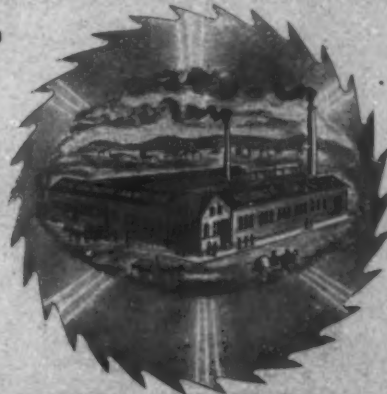
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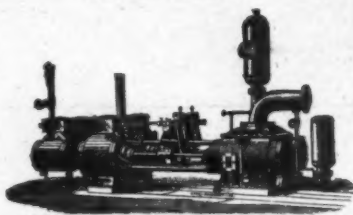
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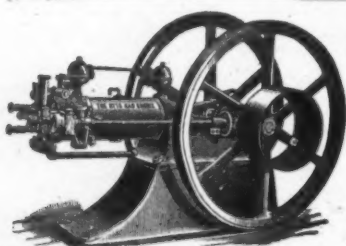
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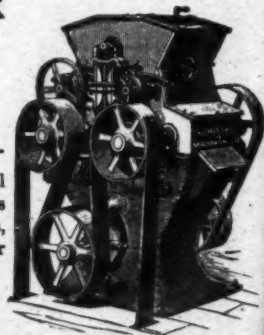
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MANUFACTURERS' RECORD

A Southern Industrial, Railroad and Financial Newspaper.

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WEEKLY.

BALTIMORE, JANUARY 30, 1892.

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BALTIMORE, JANUARY 30, 1892.

THE reported purchase of 85,000 acres of land near Covington, Va., by Mr. W. T. Thayer, of Charleston, W. Va., and others, mentioned in last week's issue of the MANUFACTURERS' RECORD, is not a new transaction, the property being a part of the large tract secured some time ago by the Potts Valley Mining & Manufacturing Co., of which Mr. Thayer is president. This company owns 75,000 acres of iron and timber lands on Potts creek, in Allegheny county, Va., and 35,000 acres of the celebrated New River coking coal land. Of the 75,000-acre tract Mr. Thayer writes:

It is pronounced by leading geologists and experts to be the largest and purest deposit of "brown hematite" iron ore in the South. This property will be developed in the spring and early summer by a railroad from Covington up the valley. On completion of the railroad, mining and shipping will be commenced on a very large scale and furnaces built.

MESSRS. HARDY & UNDERWOOD, of Birmingham, Ala., in a letter to the MANUFACTURERS' RECORD, in discussing the rapid growth of the coal exports from Southern ports to the West Indies and South America, write:

The reciprocal trade relations with South and Central America which Mr. Blaine's policy has inaugurated will confer greater direct benefit on this district than any other portion of the country, and it does not require a prophet to foretell an era of such prosperity for this section, in which the Gulf ports will share, as will astonish the world in the next ten years.

Why Chicago Is Using West Virginia Coal.

Chicago is rapidly learning to appreciate West Virginia coal and to prefer it to that mined nearer home. Recently the Tribune, of that city, sent a reporter through the town to find out the reason for this preference. The general response was that West Virginia coal afforded "a gratifying relief to many smoke sufferers." Engineer Mabbs, of the Board of Trade, said: "It costs us a trifle more a ton than the Indiana coal we had been using, but it has reduced the smoke to a minimum. Except when the furnace doors are open the combustion is complete and absolutely no smoke is emitted." An Adams-street merchant said that before he began using New River coal his store was visited every week by the health officer, but that since he had burned that coal exclusively there had been no more official calls. The aggregate of testimonies was to the same effect, and indicated that the Norfolk & Western will be compelled before long to run frequent coal trains from the Flat Top mines to Chicago, to meet the consumptive requirements of that great city.

There is much more in this statement than is apparent in the Tribune's local report. Those Northwestern bituminous coals, when in combustion, throw off enormous quantities of sulphuretted hydrogen that, health-restoring as that gas is when by nature's chemistry it is present in the crystalline waters of many famous Southern springs, is alike unhealthful and disagreeable to humanity when inhaled in the form of the soot flakes that rise from Chicago chimneys, only to be precipitated by the humid atmosphere of that great metropolis.

Among all the valuable contributions the South will make to the success of the World's Columbian Exposition none will be more entitled to general appreciation than that from West Virginia, for its famous coals, whose "combustion is complete," says Engineer Mabbs, will save exhibits from the defilement and tarnish that invariably attend the use of

those mined in Indiana, while the women of all lands who, in countless numbers, will participate in the continual round of social festivities of the exposition season, will be enabled to wear their most delicately-tinted robes without fear of sooty pollution.

The MANUFACTURERS' RECORD congratulates the Chicago Tribune on the zeal it has displayed in pointing out how the great metropolis of the West may get rid of its suit of soot, and extends also to West Virginia's coal miners and coal carriers its congratulations upon the great part they will be called upon to take in the purification of Chicago.

It is a somewhat singular fact that while our ocean greyhounds are using Virginia and West Virginia coal to break the time records of travel between Europe and America, the most notable city of the West is preparing to employ it as a fuel in the interest of the cleanliness, comfort and health of its own people, and of the millions from near and far who will attend the Columbian Exposition.

A Real Estate Congress.

The National Real Estate Congress will meet in Nashville on February 17, 18 and 19. The object of this meeting is to form a national association of real estate agents, through which a more uniform system of transacting business may be established; to create closer fraternal relations between agents and owners; to encourage the organization of State associations and real estate exchanges in the various cities of the country; to direct legislation in reference to laws bearing on the transferring of realty, simplifying lien laws, mortgages, etc., and to elevate and dignify the real estate business in all its branches; to direct, as far as is possible, the investment of money in those sections promising the greatest returns, and to discourage wild speculation in unpromising localities. This congress should prove of great value to all interested in real estate, either as owners or agents. A large attendance is promised from the West and

Northwest, and while it is in no sense designed in the interest of the South, it would be well if the delegates from other sections could be given excursions to the coal and iron and timber regions of this section. Then, when the next meeting is held in the North or West, as it probably will be, the Southern delegates will have a chance to see the resources and advantages and study the business methods of those sections. The MANUFACTURERS' RECORD hopes to see a full attendance at the Nashville meeting and a strong national organization effected.

The Cotton Outlook.

Some weeks ago the MANUFACTURERS' RECORD said that there was a danger that after most of the cotton was out of the planters' hands the bulls would succeed in advancing prices to a point that would cause the planters to forget their present resolutions of reducing their cotton acreage and planting more grain, only to find next fall that they had again raised too much cotton. An advance in cotton is greatly to be desired, but it will be unfortunate for this to change the present prospects of reduced acreage. There are strong indications that cotton will command higher figures from now on. This is illustrated in a late circular of Hubbard, Price & Co., who say:

Cables from Liverpool advise us that the deficiency in the East India supply this year is now estimated at 600,000 bales, and Messrs. Ellison & Co., of Liverpool, cable us as follows: "Two thousand and eight hundred bales of American cotton bought here to-day for export to Bombay and Japan; more to follow." In the close consideration that is being given to the American supply at present the deficiency in the East Indian supply as a factor of ultimate strength is entirely disregarded. Assuming that this deficiency will, as above stated, reach 600,000 bales, which is the equivalent of about 500,000 bales of American cotton in weight, the reduction in the world's supply this year as compared with last, even with an American crop of 8,300,000 bales, is fully 500,000 bales, and should the production in this country turn out to be not over 8,000,000 bales, as is still quite within the range of possibility, much higher prices would unquestionably result.

Why the Nicaraguan Canal Should Be Built.

A correspondent of the Richmond Dispatch sums up the reasons why the Nicaraguan canal should be promptly built as follows:

The exceeding importance of the Nicaragua canal to our own country and to the world is no longer a matter of opinion. It is a great, overwhelming and indisputable fact.

1. The voyage of Columbus, 400 years ago, was to discover a near way from Europe to the East.

2. Since his time all the leading nations of the world have been studying and working for a water-passage over the Isthmus.

3. Our own country has now the engineering problem solved, and the franchise, the power and control of this passage in her own hands.

4. The Nicaragua canal is of more consequence to us than the Straits of Gibraltar to Western Europe.

5. It places all the ports of our country in comparatively near and easy intercommunication.

6. It gives to our Pacific coast a near and ready transportation for its grain, its fruit, its woods, its minerals, and all its inestimable wealth to the Eastern markets of our own country and of Europe.

7. It doubles the efficiency of our navy and makes the defences of our ports ready and sure.

8. It places our country in the best possible position to take and maintain the supremacy of the Pacific ocean.

9. It doubles the availability of our coast-line vessels trading from port to port.

10. It gives our Southern and Eastern and Middle States great advantages in trading with the western coast of South America, with Australia, and all the East and the South seas.

11. It turns the flow of the wealth of the Indies and the best trade of Europe through the Caribbean sea, near to our southern shores.

12. It promises incalculable advantages to our southern and eastern ports, in markets for our products, and in returns of invaluable wealth from all the Pacific countries.

13. It completes the circuit of our country and makes it one in interest, one in enterprise and one in empire as the center and supreme controlling power of the world.

14. The nature and outlook of the enterprise is such as to place it far above all sectional and party considerations. It is one for which all parties and sections may rejoice to work as fellow-citizens seeking only the safety and prosperity of our common country.

15. The unanimous report of the Senate committee on foreign relations of last session, made up of the ablest lawyers and statesmen of both parties, was the strongest possible recommendation of the enterprise, and places it before the country as a great national enterprise.

For all these reasons it is earnestly hoped that our Representatives will do all in their power to help forward the work.

To the facts thus concisely stated might be added others of equal importance. The building of this canal would open up in Japan and China a great market for Southern cotton, which would prove of as much value to Western producers of grain and provisions as to the cotton planters. The MANUFACTURERS' RECORD recently called attention to this, and writing on the same subject, Rear Admiral Daniel Ammen, in a letter to the Baltimore Sun, says:

The Washington Post of the 13th ex-

presses the belief that it has led the way in the advocacy of raising less cotton. An expression of this idea by a convention, however, will perhaps only lead to an increased crop through the individual belief of the majority of planters that the discouragement of low prices and less aggregate production would warrant the expectation on their part that there would be a decrease in the production and an increased price obtainable the coming year.

More than ten years ago General Grant had a different and more encouraging idea in relation to cotton production. He said that the Chinese would soon import machinery for the fabrication of cotton, and soon after the opening of the Nicaragua canal they would require more raw cotton from us than our entire crop then grown, which was some five millions of bales, and added that there was not such another cotton-producing region on the globe as that of Arkansas and the adjacent cotton-growing lands.—[From "The Old Navy and the New," page 521]

Had it not been for the extraordinary obstructions placed in the way of the construction of the canal it would now be completed, and there would be no plethora in the cotton market. For the past five years it has been published at different times that the Chinese were supplying themselves with the best cotton-spinning machinery, but to what extent I have no accurate knowledge.

The Japanese government, through their consul-general in New York, has expressed a lively interest in the completion of the Nicaragua canal, specially to obtain their cotton supply from us direct instead of via the Canadian Pacific Railroad and thence by British steamers to their ports, and a part of it via the Suez canal. The Japanese number 40,000,000, and, their consul-general says, make a larger use of cotton per head than any other people. Shall we raise less cotton, as the Post suggests, or open up a ready market for our surplus through the construction of the Nicaragua canal with the least possible delay, which, in my belief, may be accomplished within four years?

With this canal completed there will be no need for trying to decrease the South's cotton crop. We could go on opening up for cultivation the rich lands of Mississippi, Texas and Arkansas and still find a market for all of our cotton. Surely the South is vitally interested in this great work. It means to this section a vast shipping trade at its South Atlantic and Gulf ports, great commercial cities, a demand for its coal and iron and cotton beyond our highest expectations; in fact, it means a degree of commercial and industrial activity and prosperity and general advancement such as we have scarcely dreamed of.

Will the business men of the South rally to the support of this great undertaking, the most important enterprise now engaging the world's attention, and work for its early completion? Fortunately it is in no sense a party question. Democrats and Republicans are alike in favor of it. It is one of the few subjects which broad-minded Americans, regardless of political affiliations, endorse as of national importance. The South should bend its whole energy to aid in the rapid construction of this canal.

In discussing this subject the Mobile Register says:

The reader of the Register's commercial

reports of yesterday must have noticed a dispatch from Liverpool stating that 500 bales of American cotton had just been shipped from that port to Japan. The fact that our cotton goes to Liverpool, and thence by way of the Suez canal to China and Japan, is pregnant with meaning. It emphasizes the demand for a cheaper, shorter and more direct route from the Southern cotton fields to the great Oriental empires, which stand ready to absorb many millions of bales more than we now produce. It is impossible, as the Register has already said, to restrict the production of cotton. The West would find it impossible to restrict the production of corn and wheat. As population increases the area of farms must correspondingly increase. Improved modes of cultivation must add to the natural increase. The remedy as regards cotton is identical with the remedy found by the Western people to compensate for increasing raw material. It is to find new uses for and new avenues for sale of these products. One of the remedies as to cotton is the opening of the Nicaragua canal, so that our cotton may go to Japan by way of the Gulf rather than by way of the Suez canal. Commodore Ammen writes an interesting letter to the Baltimore Sun upon this subject. It is as follows. * * *

General Grant was right. He was a man of rare observation and seldom spoke—never except when he had something valuable to say. He had traveled around the world, and made personal examination of the condition of affairs of China and Japan. No man ever had better opportunities to get at the inner facts of those very close empires. When he said ten years ago that China would be in condition to take 5,000,000 bales from us he hardly overhot the mark. Japan stands ready to take as much more. The population of Japan justifies the belief that her people can consume at least 3,000,000 bales. However that may be, it is certain that the demand from the East—that is to say, from the West, for what is the East to Europe is actually the West to us—will in time much more than compensate to the South for the excessive yield at present. Instead, therefore, of listening to those who seek to decry the great labor of Senator Morgan and other far-sighted statesmen, let the South as one man come to the support of the Nicaragua canal and demand its speedy opening by aid from our federal government. The war-making power of Congress demands it. The interstate commerce power of Congress justifies it. The power to regulate commerce with foreign nations joins in the demand.

THE way in which the South is invading the North and West with its finished iron product, as well as with its pig iron, is shown in a letter received by the MANUFACTURERS' RECORD from Messrs. W. T. Partridge & Co., of New York, Eastern agents of the Radford Pipe & Foundry Co., whose works are located at Radford, Va., and Anniston, Ala. Messrs. Partridge & Co. write that the Radford Co. has just secured contracts for 1,000 tons of iron pipe for Lancaster, N. H., 500 tons for West Newton, Mass., 110 tons for Swampscott, Mass., 50 tons for South Faringham and 725 tons for Whitefield, N. H. Some time ago the MANUFACTURERS' RECORD reported that this company had sold 3,000 tons of pipe for shipment to Spokane Falls.

If you are not already a subscriber to the MANUFACTURERS' RECORD, send us \$3 and you will receive it regularly for one year or six months for \$2.00.

Southern Iron in Northern Markets.

Some years ago, when the MANUFACTURERS' RECORD was fighting the first battles for Southern iron against the claims of Northern iron makers that the South could never ship pig iron into the North and Northwest without a serious loss on every ton, there were comparatively few industrial journals that did not ridicule our claims on this point. But year after year, as the South kept on sending its iron North, one convert after another was made, until at last even the Iron Age admitted that Southern furnaces could do what the MANUFACTURERS' RECORD had persistently claimed. In its last issue the Iron Age had an editorial which in this connection is well worth republication. Discussing the question of Southern iron in the Northwest, the Iron Age said:

It is easy to prophesy, but it is another matter entirely to read the future. Southern coke pig iron continues to be sold largely in the Northwest despite the prediction so often made of late years that it was destined soon to be shut out. The advent of more local producers in the Northwestern field has not had the expected effect. It seemed to be a perfectly natural conclusion that in a time of restricted trade the competition of local makers would be so great that the Southern companies would find themselves cut out completely. Such a period has just been experienced. Low as the Northern irons were sold, the Southern makers manfully met the situation and made prices accordingly. There have been some very large contracts placed within the past two or three months which the Northern furnacemen were anxious to get, but which were captured for Southern makers. It has been claimed so long that the low prices realized for Southern iron would land the producers in bankruptcy, while as yet there has been no general financial embarrassment among them, that this tune is about worn out and is seldom heard. The persistence with which the South keeps up the fight, with undoubtedly a very light margin of profit, is beginning to elicit admiration for the pluck of its manufacturers.

The fact is conceded, however, by those who handle Southern pig iron in the Northwest that they have not had their share in the increased consumption of pig iron in that territory. There has been a tremendous growth in this respect within the past five years. The manufacturing interests of the Northwest have gone forward with great strides in that time, and have carried with them an ever increasing demand for pig iron. This enlarged demand has been met by the increased number of local furnaces making foundry pig iron. Five years since there was but one concern, the Chicago Furnace Co., making foundry pig iron at Chicago, and it ran but one stack, finding the market a tight squeeze sometimes in placing this limited output. Later the Bay View furnaces at Milwaukee were diverted by the North Chicago Rolling Mill Co. to the manufacture of foundry pig iron, but rather intermittently. After the organization of the Illinois Steel Co. the production and sale of foundry pig iron became a regular part of their business. The Northwestern Iron Co. and the Minerva Furnace Co. then entered the field for local favors, but did not continue so regularly as the others. The past summer the Iroquois Furnace Co. joined the ranks of the Chicago furnacemen and are now an important factor in the field. With this steady advance in the

production of local pig iron, the Southern coke iron trade in the Northwest has remained nearly stationary, but it has nevertheless held its own quite remarkably under the circumstances.

The representatives of Southern furnaces assign special reasons for their failure to gain a good slice of this increased business. Price has played a much less important part than would be imagined. The great hold which Northern manufacturers have secured upon the local trade has been by their willingness to make long contracts. It is not uncommon, but quite the reverse, for a large consumer to place his requirements for a whole year with a Northern furnace company. This is done even when prices are very low. The Southern companies are for the most part disinclined to do this. Occasionally a company can be found which will make such a contract, but it is an exception. The consequence is that the large consumers, who have been educated to anticipating their full season's requirements, only take one-third or one-fourth of the Southern iron which they would take if they could contract for the whole year. But this is not all. It is alleged that the Southern companies act as if they looked upon their Northwestern trade as merely a temporary matter. They do not regard their patrons as in any sense their customers, whose favor it is desirable to cultivate and preserve. This is not a new development, but is a peculiarity which has been noted for years. It might be supposed that by this time they would have been convinced that they could retain a considerable portion of Northwestern trade and that it would be well to adopt the measures necessary to accomplish that purpose.

An English View of the Cotton Question.

The Textile Mercury, of Manchester, England, is afraid that if Southern cotton planters reduce the acreage in cultivation the English cotton mills will not be able to get their raw material at the low prices now prevailing, and so it attempts to prove that there is no need to decrease the acreage. In its last issue it says:

The cotton growers are reported to be in trouble owing to the superabundance of their crops. We suspect this is a trouble that will be much easier to bear than a great deficiency. As an illustration, take for instance the grain famine in Russia, and the sufferings this is inflicting upon the poor peasants. Suppose the cotton crop had failed in the American States as completely as the grain crop in Russia, what would have been the plight of the growers? We venture to say—a great deal worse than it is at present. Suppose that the present crop and that of last year had been each a million bales less than they have been, whilst the same outlay had been made upon them. Take it that the present decline will represent an average drop through the two seasons of 20 per cent.—it will certainly not be more—they have had a gain in the production of 25 per cent., which will have left them a handsome additional profit. Where then is the necessity for the agricultural commissioners of the cotton States to have adopted a joint appeal to those concerned to reduce the cotton acreage by 20 per cent., as we learn from Memphis that they have just done? Of course, this appeal corresponds to appeals made to spinners and manufacturers in Lancashire in times of pressure, but is quite desitute of the like justification; and we don't expect it will be any more successful; therefore, the trade on this side need not run down to Liverpool to volunteer 1/2d. per pound more for the raw material they may require. We hardly think the motives or facilities for combination amongst cotton growers exceed those to be found on this side, or that a more successful result will attend this appeal.

The South the Place for Immigrants.

Forty-nine people left Manchester, N. H., some months since, and went via Chicago and New Orleans to Honduras, where they expected to establish a colony on lands granted to some person named Perry, of whom they had bought quite a number of acres. Gorgeous descriptions of the rich soil, tropical fruits, abundance of fish and game and of the delightful climate had so dazzled their imaginations that they did not take the precaution of sending out a trusty observer to ascertain the facts. When they reached that part of the Honduras coast along which runs the Perry grant they found a dangerous surf and were compelled to go some distance beyond it to find a safe landing. Nor was this their only disappointment. The climate was broiling and roasting hot. There was nothing like fruit or vegetables growing there. The land which could be so easily cleared was an almost impenetrable jungle. The fish were sharks and alligators, and the game was a razor-back wild hog, which was seen only occasionally.

To add to the rest, malarial fever struck several of the party and one died. The party was provided with plenty of provisions which had been brought along, and there was no danger of starving. After four weeks of endurance, a sailing vessel came opportunely, and the party gladly boarded it and returned home, each member the poorer by \$400 and for the time lost.

If the same party had located at any one of a multitude of places in the Southern States, its members would have been rejoicing in its healthfulness and business advantages. Before accepting alluring accounts of tropical attractions as facts, our New England friends who are possessed of the spirit of migration should make a prospecting tour through the South. If in that favored region they cannot find a suitable location for their "lares and penates," they can never hope to find one in Central America.

Total Railroad Construction in 1891.

The revised report of railroad construction in 1891 by States, as compiled by the Railway Age, gives the following:

TRACK LAID IN 1891.					
Lines.	Miles.	Lines.	Miles.		
Maine.....	1	5.00	Missouri.....	4	36.10
New Hamp.....	2	7.00	Arkansas.....	6	74.60
Vermont.....	2	19.90	Texas.....	9	143.25
Massachusetts	1	5.76	Kansas.....	1	1.39
Rhode Island.	1	4.00	Colorado.....	5	156.59
New York.....	6	174.60	Indian Ter.....	1	5.76
New Jersey.....	13	66.61	N. W. Mexico.....	2	19.21
Pennsylvania..	39	308.24	Iowa.....	2	28.41
Maryland.....	1	3.00	Minnesota.....	7	109.80
W. Virginia.....	14	183.80	N. Dakota.....	3	101.90
Ohio.....	13	163.55	S. Dakota.....	4	54.72
Michigan.....	8	131.11	N. Dakota.....	2	44.00
Indiana.....	4	29.27	Wyoming.....	2	57.43
Illinois.....	8	95.13	Montana.....	4	168.00
Wisconsin.....	7	126.58	Washington.....	13	231.05
Virginia.....	18	188.41	Oregon.....	5	54.02
N. Carolina.....	8	115.90	California.....	11	158.74
S. Carolina.....	6	212.35	Idaho.....	1	20.40
Georgia.....	13	212.90	Utah.....	4	81.63
Florida.....	8	84.00			
Alabama.....	8	189.24	Total in 43		
Tennessee.....	13	177.02	States and		
Kentucky.....	3	20.95	Territories.....	286	4,381.71
Louisiana.....	6	133.45			

Additional English Capital for Middlesborough.

An extraordinary meeting of the British shareholders of the American Association, Limited, was held in London the eighth of this month, at which the directors reported what action had been taken in securing subscriptions to the new preference shares and debentures authorized at a preceding meeting, a full report of which was published in the MANUFACTURERS' RECORD. The report showed that from both classes of subscription a cash capital of £100,571 had been assured, which was £50,000 less than the estimate of what would be required. A few of the directors made good this deficiency, £30,000 being taken by two members under certain stipulations that would enable them to reduce their investments at a later day if the affairs of the company would permit. This money, the chairman stated, would enable the company to retain its ownership of the Knoxville, Cumberland Gap & Louisville Railroad, and to work in connection with the Belt Railroad at a very great saving of expense to the Association. It was also announced that the Marietta & North Georgia Railroad was now prepared to pay half the cost of completing the railroad bridge, and that assurances had been received from Mr. Powers, chairman of the Middlesborough Town Lands Co., that the outlook there was "in first-rate shape," and that "the creditors of that company had been paid in cash."

The report and the action of the directors were approved. In this connection the following telegram from Middlesborough dated January 22 to the daily papers is of interest:

Clarence Carey, of New York, president of the Knoxville, Cumberland Gap & Louisville Railroad Co., will arrive here to-morrow night. The object of his visit is to take control of the Middlesborough Belt Railroad, which hereafter will be operated by the former company. It is stated that the general offices will be transferred from Knoxville to this city. Both railroads are the property of the American Association, of London.

THE contract for the building of the Austin & Northwestern Railroad from Fairfield to Llano, Texas, has been awarded to Messrs. Ricker, Lee & Co., of Galveston, large railroad contractors. This is one of Mr. C. P. Huntington's roads, and this extension is to be completed by April 1, according to a contract made between Mr. Huntington and Llano people, as reported some time ago in the MANUFACTURERS' RECORD. The Llano News reports that several other railroad companies are investigating with a view to extending their roads to that point, and also that a contract has been made by a responsible company to build and put in operation an iron furnace within one year from the date of the entrance of the first railroad train.

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The South and the World's Fair.

In a recent address to the legislature and people of New York the associated dry goods merchants of the metropolis have given many strong reasons why that State should stand foremost among its sister exhibitors. Some of these appeal to the patriotism, others to the pride, and still others to the self-interest of the people. Among the latter the following is conspicuous:

New York city and State constitute the natural gateway of the United States. The great tide of foreign visitors who will be attracted by the Columbian Exhibition will necessarily flow through New York. European manufacturers will come by thousands, and will land at New York city, and on their way to the West, over our great trunk line railroads, they cannot fail to observe our State's mighty system of waterways, our profusion of manufacturing sites and our numerous and pre-eminent advantages on account of our close proximity to markets. The transfer of manufacturing industries to the country from abroad, and the creation of new ones by the aid of foreign capital, cannot but receive a powerful and permanent stimulus from the World's Fair.

What is said in the above of New York may, with equal propriety, be said of New Orleans in connection with the Central American countries, for the Illinois Central Railroad is maturing a plan for carrying the citizens of those countries in steamships from their home ports to New Orleans, and from thence, over its own line, to Chicago.

In a more general sense this is an argument for extensive exhibits from all the Southern States. The thousands of European manufacturers visiting the exposition will be more interested in and allured by displays of the many raw materials of the South than they will be by what they see from the car-windows between New York and Chicago. And if these exhibits of natural resources shall be accompanied by maps showing the water powers of the State; their proximity to railroads, the connections of the latter with various other systems and with seaports, then these foreigners will learn that they can carry on their industries to much greater advantage in the South than elsewhere in this country. But, to give full effect to the above, every Southern State ought to have prepared a large map, to be displayed conspicuously in its space, on which should be depicted the location of its minerals, forests, water-powers, mills and factories, principal towns, health resorts, colleges and other prominent educational institutions and its entire railroad system, whether existing or in course of construction. On the broad margins, in conspicuous type, should be statistics of every kind for the stranger's information. The State commissioner and his assistants, being thus equipped, would then be able to answer intelligently all questions, and at the same time fix in the minds of those inquirers the exact location of whatever place had attracted their attention.

How the South Has Been Hurt.

The injury which the legitimate business interests of the South have received by the fraudulent schemes that have been started, in many cases by Northern people, but sometimes by Southerners, cannot be estimated. Many of the deluded investors in the Georgia-Alabama Co., Cardiff and similar schemes become enemies to everything that is connected with the South, and when men are once "taken in" in this way it is very difficult to get them to invest in any Southern enterprise, however meritorious. The Boston Globe publishes a dispatch from Fall River which shows the effect of such operations. The dispatch says:

There are a number of the leading citizens here in anything but a pleasant frame of mind. They are the cute business men of the town, rich in experience, many of them having sounded all the depths and shoals of financial navigation, and with as keen a Yankee edge upon their business instincts as can be found anywhere. Yet they are ready to throw up their hands, and confess that they have been taken in and sheared of all their shrewdness and experience by the hated race of rebel brigadiers. It came about in this manner:

Two years ago an agent of the industrial boom in Florence, Ala., came to this city with his boom and his story of the marvelous natural resources and ultimate future of Florence. He was a judge and a gentleman, and armed with credentials from Philadelphia capitalists and a persuasive tongue, he succeeded in getting capitalists here to invest in the Florence Iron Works, then built on paper, to the tune of nearly \$200,000.

Some of the investors were disinclined to invest in futures of any kind, in view of past experience, but the judge assured them that this was a sure winner, and that the Florence boom would grow while you waited, if it wasn't deemed advisable to hold it back. So the judge and the money of the investors departed for Florence.

Expectations didn't realize. The boom progressed so far as to enable those who were steering it to gather in a large raft of tender-feet and build the iron works. Then it flattened out.

The investors here and elsewhere clamored for information and explanations. They got very little of either, and that was of an unsatisfactory quality.

The reason given for not operating the works was that there wasn't a dollar left in the treasury, and that the game could not proceed further unless stockholders had a mind to ante more cash. This nobody seemed inclined to do, and so things remained at a standstill, and nobody spoke above his breath for fear he would give himself away to the public as a "sucker."

The annual meeting of the corporation was held last week, and the men in this city who had flashed up \$200,000 under the seductive influence of the judge's eloquence, appointed Col. W. R. Warner, of the firm of Cobb, Bates & Yerxa, and W. H. Chase, of the Union Belt Co., to go and represent them and get an accounting. They went, and have just returned.

From the officers of the Florence Iron Works they say that they could get little satisfaction, but in the course of their investigation they discovered that neither they nor their friends here were in the concern at all. What they had pooled in had been used to boom land instead of manufacturing stock, and at present quotations land could be bought by the acre for the price obtained for a square foot at the time they invested.

At the stockholders' meeting no attention was paid to their protests, and immediately after it adjourned the directors went into executive session and denied themselves to the envoys from Fall River.

They have returned and reported, and that is why lots of men have an anxious, careworn look in this city to-day.

The Production of Pig Iron In 1891.

In the MANUFACTURERS' RECORD of January 2 an estimate, based on special reports, was published of the production of pig iron in the South in 1891, the figures being 1,912,039 tons. The official report of the American Iron & Steel Association, just issued, shows that the actual production was 1,914,042 tons, a difference of only 2,000 tons in a total of nearly 2,000,000. This report shows that the total production of pig iron in 1891 in the whole country was 9,273,455 net tons of 2,000 pounds, or 8,279,870 gross tons of 2,240 pounds, against 9,202,703 gross tons in 1890—a decrease of 922,833 gross tons, or over 10 per cent. The decreased production may be said to have all occurred in the first half of 1891, as the production in the second half of 1891 was larger than in either half of 1890. The production in each half of 1890 and 1891 was as follows, in gross tons:

Years.	First half.	Second half.	Total.
1890.....	4,356,513	4,642,190	9,202,703
1891.....	3,368,107	4,911,703	8,279,870

Our production of pig iron in the second half of 1891 was 269,573 gross tons larger than in the second half of 1890, which was the half year of largest production in our history prior to 1891. Our production in the second half of 1891 was at the rate of 9,823,526 gross tons per annum. It was larger than in any full year in our history down to and including 1885, and larger than Great Britain's production in any whole year down to and including 1867. Our production of pig iron in 1891 was about 1,000,000 gross tons larger than that of Great Britain in the same year.

The shrinkage in production in 1891 as compared with 1890 was distributed among the different fuels used in our blast furnaces, and it was shared by most of the pig-iron-producing States in the North and West, most notably by Pennsylvania, which lost over 500,000 net tons, all in the first half of the year. But the Southern States lost in the aggregate less than 40,000 net tons, while many of them actually increased their production in 1891 over 1890, as will be seen from the following table:

States—Net tons.	First half 1891.	Second half 1891.	Total 1891.	Total 1890.
Alabama.....	376,389	514,765	891,154	914,940
Tennessee.....	145,666	181,681	326,747	299,741
Virginia.....	141,908	188,819	330,727	327,912
West Virginia.....	20,977	75,660	96,637	144,970
Kentucky.....	18,779	31,446	50,225	33,604
Georgia.....	20,401	35,440	55,841	32,687
Maryland.....	49,992	88,214	138,206	165,559
Texas.....	8,465	12,437	20,902	10,865
North Carolina.....	1,603	2,600	3,603	3,181
Total.....	782,980	1,131,052	1,914,042	1,953,459

The stocks of pig iron which were unsold in the hands of the manufacturers or their agents on December 31, 1891, and which were not intended to be used by the manufacturers, amounted to 596,333 gross tons, against 442,055 gross tons on June 30, 1891, and 608,921 gross tons on December 31, 1890. The above figures include a part of the stocks of pig iron held at the periods named in storage warrant yards, and which was under the control of the makers, the part not under their control on the 31st of December last amounting to 30,900 gross tons, which, added to the 596,333 tons above mentioned, makes a total of 627,233 gross tons which were on the market at that date. On the 31st of December, 1890, the storage warrant yards held 52,900 gross tons of pig iron which were not under the control of the makers, making a total of 661,821 gross tons which were then on the market. The difference between the aggregate of unsold stocks at the close of 1890 and 1891 was only 34,588 gross tons.

If the demand for pig iron for consumption were now exceptionally active, and if prices were advancing, the stocks held at the close of 1891 would not be excessive. It is for the producers themselves to decide whether these conditions exist. It will be remembered that at the close of 1890, and soon afterwards, many furnaces

were blown out because of the accumulation of unsold stocks, yet they did not then aggregate much more than the quantity with which we began the present year.

The production by States for the last four years was as follows:

PRODUCTION OF PIG IRON IN 1888, 1889, 1890 AND 1891.	1888.	1889.	1890.	1891.
States.	1888.	1889.	1890.	1891.
Maine.....	5,574	5,200	1,200
Massachu'ts.....	13,248	7,751	5,531	10,069
Connecticut.....	21,644	24,143	22,552	24,428
New York.....	257,189	297,247	369,381	352,925
New Jersey.....	101,882	125,693	177,788	103,489
Pennsylvania.....	3,389,186	4,181,242	4,915,169	4,426,673
Maryland.....	17,666	33,847	166,599	138,206
Virginia.....	197,395	251,356	327,912	339,727
N. Carolina.....	2,400	2,898	3,181	3,603
Georgia.....	39,397	27,539	31,687	55,841
Alabama.....	449,492	791,425	914,940	891,154
Texas.....	6,587	4,514	10,865	20,902
West Virginia.....	95,259	117,900	144,970	95,637
Kentucky.....	59,790	42,518	53,664	50,225
Tennessee.....	277,811	294,665	299,741	326,747
Ohio.....	1,103,818	1,215,572	1,389,170	1,159,215
Indiana.....	15,260	8,819	16,398	8,657
Illinois.....	579,307	601,033	785,239	749,525
Michigan.....	213,251	214,356	258,461	238,722
Wisconsin.....	116,637	158,634	246,237	210,819
Missouri.....	91,783	86,190	100,550	32,736
Minnesota.....	1,573
Colorado.....	20,877	2,678	23,558	20,290
Oregon.....	2,569	9,426	12,395	10,411
Washington.....	4,693	10,171
Total.....	7,268,507	8,516,079	10,307,028	9,273,455

A Landmark in Periodical Literature.

With the number for February, the Forum completes its twelfth volume, under conditions which make what may be fairly called a landmark in American literature. The dominant idea in the establishment of the Forum was to create a vehicle for the discussion of the great problems that press for solution in the United States. It is literally true that the most rapid progress that has ever been made by the human race has been made by the people of the United States within the lifetime of the present generation. There is evidence of this in every direction of activity. The continued growth alike of the great Western cities, our constantly increasing commerce and manufactures, the new development of the Southern States, the accumulation of wealth and the continued decrease in the rate of interest—all these things, as well as the prodigious movement which expresses itself by a continual increasing patronage of our oldest institutions of learning and in the founding of new institutions alike in the East and in the West, indicate that the most important industrial and social epoch perhaps in the whole history of civilization is the epoch in which we live. A broad view of American progress during recent years brings home to every thoughtful student the conviction that we are living in a time richer both in results and in promise, in interesting subjects for investigation and for public discussion, than any preceding time. To encourage discussion of all these important new subjects, and of new phases of old subjects, a company of literary men six years ago established the Forum, not primarily as a commercial enterprise, but as a great public institution. The reception that it met proved at once the correctness of the analysis they made; it grew without an interruption, and soon established itself in a commercial as well as in a literary sense.

The February Forum has as a special feature an explanation of three of the greatest industrial problems in all history, which now await us: The Nicaragua canal (in both its commercial and its political aspects), the further development of lake commerce and of ways to the sea, and the reclaiming of a great domain by irrigation. In the same way, the largest experiments that have been made in practical philanthropy—Gen. Booth's great plan of work in England and the German labor colonies for tramps—have been investigated for the Forum by Prof. Francis G. Peabody (who is now studying social systems in Germany), and by Dr. Albert Shaw, who went to London to study the results of the first year of Gen. Booth's work with the large sum that was collected in response to his appeal in "Darkest England."

VIRGINIA'S TIN MINE.

A Promising Outlook for a Great Enterprise.

The MANUFACTURERS' RECORD has frequently referred to the tin mine near Savernake, Va., which Boston capitalists have been quietly developing for many months. The high business and financial standing of the people interested in this enterprise gave good reason for the general belief that they had found a very valuable property, but they have steadily declined to give any facts for publication, preferring to wait until the matter was fully tested by practical operations on a large scale. For this purpose three or four of them united and put up over \$50,000 worth of machinery. This enterprise has now been consolidated with the Savernake Steel & Tinplate Co. The last issue of the Advocate, of Buena Vista, contains the following interesting facts about this property:

"The directors of the Savernake Steel & Tinplate Co. assembled on the 16th inst. for the purpose of visiting and examining the Cash tin mine and mill on Irish creek, and for other business connected with the establishment of the tinplate works at Savernake. The party, which included the president of the company, Titus S. Emery, Esq., of Philadelphia; the vice-president, Col. Dunlap, of Savernake; the treasurer, Ashton Starke, Esq., of Richmond, and the secretary, L. T. W. Marye, Esq., of Richmond, together with the following directors, Messrs. E. B. Addison, Richmond; John R. Macmurdo, C. & O. Railroad Co.; T. A. Hicks, Philadelphia, left Buena Vista in a special sleeping and dining car furnished by the Chesapeake & Ohio Railroad Co., and attached to the 9.15 A. M. train on Norfolk & Western Railroad by the courtesy of that company, for Vesuvius.

"Several others of the company and directors were unfortunately delayed in reaching here in time to join the party, and missed the trip to the tin mine. These were Messrs. John C. Parkes, of Chicago, Ill.; C. N. Clingan and Wilkins Trick, of Hubbard, Ohio, the latter the tinplate manufacturer of the company, and Mr. Chas. H. de. of Pittsburg, the consulting engineer of the company.

"Carriages had been sent to Vesuvius the day previous by Mr. J. M. Henkel, of Buena Vista, to transport the party to the mine, a distance of 9 miles from Vesuvius across the Blue Ridge. The weather was severe, the mercury ranging that morning at 8 degrees above zero, but the party was full of enthusiasm to inspect the tin mine which they had secured, and well provided against the cold. The trip over was comfortably made and the mine and mill reached about 1 P. M. The mill was first inspected under charge of Messrs. A. A. Brooks and W. H. Ellis, of the Boston Tin Mining Co., who had joined the party at Buena Vista. General surprise and admiration was expressed by the visiting gentlemen that so complete and extensive an ore-dressing plant should have been built in the mountain so far from the railroad, and at the excellence of the machinery for the purpose.

THE MINES AND MACHINERY.

"The mill is a large frame building covered and roofed with corrugated iron, and has been built in the form of steps, on solid rock foundation, blasted out of the side of the mountain, each piece of heavy machinery resting on a rock foundation of nature's laying. A 400-horse-power engine occupies a portion of the ground floor in as perfect order as that of one of our ocean steamers, and with all the bright work resplendent. This engine has an 18-foot driving wheel, carrying a 32-inch main driving belt, and is supplied with necessary steam boilers in an adjoining room. The mill being built, as stated, against the side of the mountain, advancing

tage is taken of the topography to bring the ore from the mine at No. 1 vein, only some 400 feet distant, by a car on a track with slightly descending grade to the upper story of the mill; from this track the car dumps its load of tin ore into the mouth of a powerful Gates crusher, with a capacity of 20 tons per hour or 200 tons in the 10-hour day. This ore, which is fed in large lumps to the crusher, leaves it as sand and fine gravel, passing by dust-proof shoots to the floor below, where a Sturtevant grinding mill reduces it to powder. From this mill the pulp or ground ore is elevated by elevator buckets in enclosed boxes to storage bins capable of containing 100 tons of ground ore on the floor above, whence it is fed by pipes to the concentrating tables on the ground floor, and from which it discharges as dressed tin ore or 'black tin' of 50 per cent. metallic tin to the ton of ore. It is to be remarked that the mineral is never touched by hand from the time the rock is dumped into the crusher until it is discharged as 50 per cent. dressed tin from the concentrating tables, the whole process being automatic, or as nearly so as the machinery can be made to act. The method of concentration is especially interesting, as being the American system of ore separation and applied to tin-ore dressing for the first time on a large scale, and as being in contradistinction to the Cornish method, where the ore is first stamped and then washed by tiresome and continued hand labor through 'tyes' and 'jigs' and 'buddies,' all machines of the olden time requiring hand labor and being entirely out of the question for American wages and American ideas of product. The mill has been arranged to double its capacity by addition of concentrating tables and greater grinding capacity, for which the spaces are provided and the main and line shafting fitted. The present capacity of the No. 1 mine is 100 tons per day, while the mill is arranged for a dressed product of 50 tons daily, with arrangements, as stated, to increase it as desired to 200 tons daily, and with steam power to handle 400 tons daily, as will soon be necessary, from the fact that the two veins developed have now a daily capacity of 300 tons of tin ore. Thus has a tremendously important industry been quietly developed in a corner of Rockbridge county, which bids fair to soon be a prominent factor in the tin product of the world; while there is no evidence in the surroundings that the 'lot boom,' or the sign of 'free sites for industrial enterprises,' has reached the region where the snow covers mineral wealth beyond computation, and the laurel and ivy roots mingle with the capital of embryo national banks, and 'the stone which the builders refused has become the chief stone of the corner.'

"The mine was next visited by the party and exhibited by Mr. Ferguson, the miner in charge, who took a natural pride in the magnificent mineral show under his charge, and pleasure in explaining and displaying its value to the visitors. The mine, which is really a quarry at the No. 1 vein, is opened to a width of 50 feet, with a perpendicular face of over 55 feet of ore, has been timbered and shut in to admit of working in winter, and the ore is now mined by three slopes, one above the other, by means of passes, from which the ore mined in the top shoots descends to the car on the track in the bottom level, and is run by gravity into the mill. Great and important changes have recently taken place in this vein, especially in the amount of very rich ore obtained, all of which grade is saved for future uses, the average low grade ore only being treated in the mill at present. The party was extremely impressed with the beauty and richness of the crystalline ore, as well as with the immensity of the average ore in quantity, and expressed their satisfaction that if there

were no other vein on the property, the No. 1 mine would entitle it to rank, as it certainly does, as the leading tin mine in the United States at least.

"After a late dinner the directors re-assembled at Savernake, where an important business meeting was held looking to the immediate carrying out of the objects of the enterprise, and which was prolonged until the approach of Sunday compelled an adjournment. Some of the gentlemen left for home, others staid a day or more at Buena Vista; all were heart and soul in the enterprise projected, and satisfied with the great value and promise of this mineral corner of Virginia.

"Such was the examination of the tin mine and mill, and this may have been a red letter day for Virginia and the whole South as well as for ourselves, as it has demonstrated to capital the absolute truth of the existence of a large and practically developed tin mine in profitable productive operation, and capable of almost indefinite extension.

"Such wealth does not long remain unproductive, and another summer will, it is to be hoped, as it is intended, see the tin from this mine used for coating plates made from Virginia steel ores, and the whole product emanating from Virginia soil."

Experimenting with Tobacco.

The chemists of the National Department of Agriculture are experimenting with tobacco, to ascertain whether the process in common parlance termed "bulking" can be so done as to improve the flavor of inferior leaf.

When leaf tobacco is heaped in a mass it becomes heated and "sweats" or ferments. During this operation the aromatic aroma is formed. This, say the scientists, is due to bacteria, of which every variety of the leaf has its own especial kind. It is said to have been ascertained that when the bacteria of a highly flavored tobacco has been transferred to inferior stock, the result has been to impart to the latter all the aroma for which the former is prized. As these experiments are still in progress, it is too early to advise tobacco growers to act upon this theory, but from the results thus far obtained, there is reason to expect that before long the Department of Agriculture will be able to instruct the tobaccoists of the United States how to convert mediocre leaf into any desired quality, in so far as the aroma is concerned.

A VERY interesting summary of the advantages and resources of Llano, Texas, and the surrounding country has been published in pamphlet form, and can be had upon application to F. R. Malone, president of the Llano Furnace & Improvement Co. The very great attention that is being attracted throughout the country to Llano's Bessemer ores makes everything pertaining to the development of that section of more than usual interest. In addition to its Bessemer ores Llano has granite, white marble, blue marble, sandstones, slates, cements, asbestos, graphite, manganese, clays, etc. Judged by its natural advantages of location, climate, minerals, water-power, etc., it would seem to be justly entitled to become the center of industrial development for the great State of Texas. From the Llano News, one of the most enterprising of our exchanges, we take the following statement, made by a visitor to that place: "Llano county, and especially the valley of the Llano, is the most beautiful piece of creation during the spring months that my eyes have ever rested upon. The hills and mountains are covered with green trees and flowering shrubs. The valleys are carpeted with flowers of a thousand colors, whose fragrance wafted on the cool pure breezes that always blow softly through this valley make Llano the most enchanting spot in the world."

Practicability of a Railroad Over the Cumberland Plateau.

KINGSTON, TENN., January 23, 1892.

Editor *Manufacturers' Record*:

The question of an east and west railroad over the Cumberland plateau, in Tennessee, is not new by any means. That such a line would ultimately be built has long been the opinion of men who have given this subject any thought. The question of when it would be constructed, and where its exact location would be, however, is a matter not so easily settled, and there have been some who have questioned whether the cost of such a line would not be even too great to preclude its construction as an investment. Let us now look at the map of East Tennessee, and see why such a road is needed. We find from Chattanooga, bearing in rather a northeasterly direction, the Cumberland plateau, extending across the State and into Kentucky. Forming the eastern escarpment of the plateau is what is known as Walden's ridge, at the foot of which runs the Cincinnati Southern Railway till it reaches a point where the Emory river breaks through the ridge, and following the river, with 27 tunnels, numerous trestles, heavy fills and sharp curves, it reaches the top and continues its course northwardly across the plateau. Between this road and the systems of roads west of the plateau, extending from Chattanooga to the central part of Kentucky, there is no connecting link. The greater part of the plateau is thus without railroad communication—a section of country with as fine a climate as one could wish, with its thousands of acres of poplar, oak and pine timber, and underlaid with the best of coal for domestic and coking purposes, and this coal has only to be brought to the foot of the ridge to be used in the manufacture of the almost inexhaustible supply of iron ore to be found there. Thus a cross line would open up and develop a rich and valuable section of country. The development of this section is not, however, the only point to be looked at. What is wanted is a trunk line—a line, say from Nashville to Knoxville, which, with its connections at these points, would shorten the distance from the Mississippi river and the West to the seacoast. Such a road must, to compete with other trunk lines, have the maximum grade comparatively light, say not more than 65 or 70 feet to the mile, and with curves of not greater than 8 degrees. The question, then, is to find the most direct route which is practicable for a road of this description to be built with the minimum expense. We must first determine where such a road can ascend Walden's ridge, which, rising on an average of 1,000 feet above the valley, abruptly terminates the mountain country of the plateau on the east, and how it would be best to cross this mountain region. In looking at the topography of this country we find that it is not by any means a level tableland, but is broken by ridges and cut deeply by streams; that the ridges or water-sheds between the larger streams often run for miles with very little change of elevation, although in places quite narrow; that the streams have a rapid fall, often several hundred feet per mile, especially in the upper part of their course. Thus a railroad, to be built at the least cost, must, as near as possible, follow the top of the ridges, as to ascend a stream it would have to be so far above the bed for the most of the way, in order to reach the head, that at every little branch it would necessitate a trestle of a hundred feet or more in height, and often quite long, while the ridges between these branches are usually so sharp and narrow that to get around them on our maximum curve would necessitate a very deep cut or tunnel. Let us now look at the

face of the ridge. White's creek is the only stream of any size which breaks through the ridge south of the Emory river, and to follow this creek would naturally seem to be the best way of gaining the top of the plateau. It is, however, typically, a mountain stream, and the objections just mentioned in this connection apply here in a more or less degree. Several surveys have been made up this creek, and result in finding the grade unsatisfactory and the work very heavy. We need not look much south of this, for, although there is a narrow-gauge road climbing the face of the ridge at Spring City, a few miles further south, its heavy grade, 200 feet or more to the mile, precludes it from ever being useful as a trunk line. The same objection that we had to White's creek applies equally well to the route taking one of the branches of Emory river, as, for instance, Clifty creek, which empties into the Emory near Harriman. Surveys at this point also show very heavy work, a heavy grade (over 100 feet to the mile) and numerous tunnels and trestles, as the stream heads high up in the mountain and has a very rapid fall.

We will now turn our attention to the side of the mountain, and find that the old Knoxville and Nashville stage road, which before the railroads was the main thoroughfare through this country, crossed the mountain some few miles below the town of Rockwood and north of White's creek at a low gap in the ridge, and that the ridge is in this place quite narrow. If we begin to climb the ridge in the vicinity of Rockwood, not further north on account of a ravine which cuts deeply into it at that point, and gaining the required distance by doubling round a spur a few miles south, a point can be reached some 400 feet above the valley, when, by a tunnel of from 1,500 to 2,000 feet through the ridge, we can make what is practically the top of the plateau. After this it would require some comparatively heavy work for a few miles to cross some of the branches of White's creek, but crossing them nearer their heads would not be so difficult as lower down, as on the White's creek survey. The road could thus be brought through Crab Orchard gap, the lowest and most available gap in the Crab Orchard mountains, which cross the plateau in this section. From here on to Crossville, some ten miles, there would be but little difference, as the country is more flat and level. The line could then run for many miles along the leading ridges. The difficulty of the descent on the western slope has already been overcome in the road which now runs from Nashville to Cookeville. As there is nothing so satisfactory as profiles and alignment to show the relative advantages of several routes, the people of Rockwood and others interested in this vicinity believe that the most effectual inducement to offer a railroad company contemplating such an east and west trunk line would be to show by a preliminary survey just how the most difficult part of the route could be overcome. To this end engineers are now at work with very satisfactory results, as with a maximum grade of 65 feet to the mile and curvature not over 8 degrees, and comparatively light work with the exception of the tunnel, the top of the plateau can be reached. This, or a modification of this route, would seem to be the most satisfactory way of solving the problem of an east and west line across the plateau.

GEO. E. SYLVESTER, C. E.

Big Trees in West Virginia.

S. G. Dodrill, of Webster county, lately cut a poplar tree from which he got seven 12 foot logs, the top end of the last log measuring 44 inches. S. B. Hanwick, in the same county, cut a poplar containing 7,848 feet of lumber, and L. A. Harris got six 12-foot and one 16-foot logs from one tree.—Elkins (W. Va.) News.

CHESAPEAKE & OHIO IMPROVEMENTS.

The Plan for Issuing Bonds and Continuing the Development of this Road.

A circular has just been issued by Mr. M. E. Ingalls, president of the Chesapeake & Ohio Railway Co., giving the earnings and condition of the affairs of that company and its plans for the future. The circular is addressed to the holders of certificates of the Chesapeake & Ohio stock. The document sets forth that it is about three years since the present management took charge of the property, and since then the development of business has more than equalled the expectations of the president. The gross earnings year ending June 30, 1889, \$5,290,000; gross earnings year ending June 30, 1890, \$7,161,000; gross earnings year ending June 30, 1891, \$8,127,000. This development has been brought about by the use of bonds, which were provided at the time of reorganization, and to some extent by what might generally be considered a large increase in the percentage of operating expenses. The board of directors are confident that if a continuation of the present policy of enlargement of facilities can be secured by adequate provision, even more favorable results can be shown in the future. The possibilities for extending the business of the company are practically unlimited.

Under these circumstances the board recommends for approval the following scheme, which provides an equitable adjustment with the preferred stockholders as well as for the future needs of the company. It is proposed to create a new general mortgage on all the property (which shall also be a first lien on property hereafter acquired by use of the proposed bonds so far as practicable) to secure bonds for the amount of \$70,000,000, and bearing 4½ per cent. interest, both principal and interest payable in gold coin of the United States, the principal payable March 1, 1902, and interest on the first day of March and September each year. About \$33,000,000 of this amount will be reserved to pay off bonds issued or to be issued under all existing mortgages on the property and for equipment notes, except the bonds on the Richmond & Alleghany division, which run until 1899, and bear interest at 4½ per cent.

Of the remainder about \$13,000,000, or such part as may be necessary, will be used in the adjustment with the first and second preferred stockholders, as explained below, and about \$24,000,000 will be available for use from time to time (under proper restrictions) for improvements of additions to and enlargement of the company's system recently made and as may hereafter be necessary or expedient.

In addition to the fixed amount of the mortgage, as stated above, suitable provision will be made in it for the issue of additional bonds at a rate not exceeding an average of \$25,000 a mile for the purpose of double-tracking the lines of the company, as may be needed from time to time hereafter.

With reference to the preferred stockholders the following adjustment is proposed:

The first preferred stockholders to receive two-thirds of the face value of their stock in these bonds, bearing interest from July 1, 1892, and one-third in common stock trust certificates. The second preferred stockholders to receive one-third of the face value of their stock in like bonds, and two-thirds in common stock certificates. Fractions will be adjusted by equitable cash settlements.

To enact this adjustment and for other needs of the company it is intended to increase the common stock by an issue of not exceeding \$15,000,000.

Of the bonds which are reserved for improvement, etc., it is proposed to sell

\$4,000,000 at once for improvements recently made or about to be undertaken. They will be offered to the common stockholders at 85 per cent. and accrued interest as soon as they are ready for delivery. A syndicate has been formed to purchase any bonds not so taken by the stockholders. The proceeds of these bonds will provide for all expenditures at present required on construction account and leave the company free of floating debt.

The Cotton Tree of Peru.

The Peruvian cotton tree is something of which we in this country have heard little, but it is already a commercial quantity of no mean importance. According to the report of the American minister this staple sells for 10 to 25 cents a pound in the English markets, which take the whole crop. In a letter to the State Department Minister Hicks, writing from Lima, says of this industry:

"Next to wool comes the production of cotton, which amounts to about \$3,000,000 annually. The best grade is worth from 11 to 11½d. in the English market, while the upland brings from 5 to 5½d. The cotton of Peru grows on a tree instead of the diminutive shrub which grows in the southern part of the United States. The tree commences bearing when it is two years old, and it continues to bear every year for 40 or 50 years. In the warm regions of the north two crops are gathered every year. England takes the whole product.

"There are three oil mills in Peru which grind the cottonseed, and their entire product is used in this country in the manufacture of soap and olive oil."

Mr. R. M. Columbus, the United States consul at Payta, lives at the mouth of the Chira river, right in the heart of the rich cotton region of the Chira valley. He furnishes a fuller and more interesting account of the cotton tree, and gives some idea of its cultivation and manufacture. In a special report upon this industry he says: "After five years of drouth this province and state are naturally depressed in the way of commerce and all kinds of industry. The valley of Chira forms a favorable exception. The production of the valley consists principally of native Peruvian cotton.

"Gossypium herbaceum peruvianum, an article used very extensively in Europe for the manufacture of woollen goods, with which it mixes readily, on account of its rough, strong and long fibre, is produced abundantly throughout the State after the rainy seasons, which are periodical, and occur generally every seven years, and is cultivated always along the banks of rivers on lowlands irrigated by the overflow of streams. The plant is arborescent and perennial, and, after fully developing, continues producing cotton for five or six years in succession, provided there be some moisture in the ground, needing, however, very little of it on account of its deep rooting, thus reaching moisture at great depths. The system of cultivation of this plant is quite primitive, the seeds being planted by making holes in the ground with spades, without tilling or manuring the soil. The plant becomes developed and begins to bear cotton in dry and sandy soil about six months after planting, and about nine months in rich and wet land, continuing to yield at short intervals for five or six years more in succession. It is wonderful to behold the same plant in blossom, with pods, buds and cotton, all at the same time, and giving a continual yield for the time above stated.

"In certain seasons of the year, about every seven years, the rains are incessant here for about two months both in the interior and on the coast, and water descends in such abundance as to almost inundate the country. Large torrents stream down

the mountain side, the valley of the Chira is deluged, and flat lands within it are turned into morasses, and morasses into lakes; in a word, the lowland becomes submerged and the accumulated mass of waters rush with great force down the central valley, which forms their only outlet. The valley, however, is wide, and the descent very gradual. The extent of the valley through which the water flows is from three to four miles wide, and though it is nearly 200 miles in extent, the valley for the whole distance is almost level. There is only sufficient descent, especially for the last 60 miles, to determine a very gentle current to the sea. Under these circumstances the great quantity of water proceeding from the mountains expands over the whole valley, and forms, for a time, an immense lake, extending in length across the whole breadth of the lowland.

"The rains generally cease in March, but it requires from 35 to 50 days for the water to disappear and leave the land dry. As soon as that is effected there springs up from the whole surface of the ground which has been thus submerged most luxuriant and rank vegetation.

"The soil is wonderfully rich, and has been under cultivation by the aborigines from time immemorial, and its fertility is kept up unimpaired by the slime (limus terre) which is abundantly deposited during these inundations.

"Cotton is collected when the pods open by women and children, who are paid in proportion to the quantity collected, the prevailing rates being 40 cents for every quintal—100 pounds. Cotton is taken from the fields to the ginning-houses, where it is cleaned and made into bales of about 175 pounds each. We have five of such establishments in this province, one in Querecotillo, on the east side of the river, about 50 miles in the interior, owned by an Englishman; two in Sullana, a city of about 4,000 inhabitants on the west side of the river, about 45 miles from the coast, owned by natives, and two in La Huaca, a village of about 1,000 inhabitants on this side of the river, 21 miles from Payta, on the railroad to Pueta—both are owned by foreigners, an Englishman and an Italian.

"The quantity exported annually averages from 65,000 to 70,000 bales, the gross value of which, at current prices here, is about \$2,000,000 in current money—Bolivian silver dollars, equal to 68 cents each. Seeds are now also being exported for oil-making. Europe is the market for both products."

Goats for Southern Mountains.

Editor Manufacturers' Record:

The manufacture of morocco from goat skins has become a great American industry, requiring, it is said, 30,000,000 skins a year. There are big factories in New York, Philadelphia, Wilmington, Del., Lynn, Boston and Chicago, nearly all of which have come into existence within 15 years. Prior to that time 90 per cent. of all the morocco consumed in the United States came from France. To supply this great and annually increasing consumption American dealers send their buyers to all parts of the world where goats are found. "These historic animals," says the New York Tribune, "are found where civilization is at the lowest ebb." The importers "find their supplies among the savage hill tribes of the northern and southern slopes of the Himalayas, in the valleys of Persia, on the steppes of Asia and among the semi-barbarous people described by Marco Polo; they get them from the sandy wastes of Arabia and the Sahara, from the slave caravans that reach the coast of Somaliland, from the headwaters of the Blue Nile and from the Kaffirs of South Africa; they scour the remotest pampas of South America and the foothills of the Andes after goat skins, and the Indian pastores of Central America

and Mexico and all the islands of the sea contribute to the total."

"The high hills are a refuge for the wild goats," wrote the Psalmist, and to this day they flourish best among mountains and their foothills. They need no shelter and forage for their food. They are exceedingly prolific, and increase with great rapidity. They are sturdy fighters, and are abundantly able to defend themselves from dogs and all other four-footed foes. They are said to be as dextrous in destroying snakes as the deer or the hog. These, then, are animals that would thrive on the rich pastures of the Southern mountains, where there are in many localities extensive ranges and no inhabitants. For \$100 a flock could be purchased numerous enough, with its rapid increase, to cover a large acreage. If the Appalachian and Cumberland-mountains farmers should each secure but a single pair of these creatures and let them browse in the vicinity of their cabins, within five years' time they could furnish as many skins annually as are now imported from Peru, and if the owners of large tracts of mountain land would stock them in anything like the numbers of goats that the bunch grass prairies are with herds of cattle, the time would soon come when the morocco manufacturers of this country would not be compelled to ransack the globe for their raw material.

In the foregoing no mention has been made of the butter and cheese obtained from goats' milk, although these animals are the source of the dairy industries of Switzerland, nor of the excellence of kids' flesh as meat for the table. These would give greater value to the mountaineer's flock of goats, increase his comforts, add to his income and to the wealth of his county and State.

Wants to Buy Magnesia in the South.

A Chicago manufacturing company, whose name can be had upon application to the MANUFACTURERS' RECORD, wants to buy magnesia. The secretary of the company writes as follows:

"I am looking for a deposit of magnesia, either sulphate or carbonate, but much prefer the carbonate. We would prefer to have this product mined and shipped to us, but, if unable to make such arrangements, would mine the material ourselves. We can use large quantities of the material, provided same can be had cheap enough. If convenient to railroad, transportation would be materially reduced, but if any inaccessible point, freight charges might cut considerable of a figure. We should want a small sample of same to examine and analyze to see whether same is adapted to our use. Carbonate and sulphate of magnesia are found naturally in a pure state, but not often in large quantities. They are very commonly found in connection with other minerals. What we want is the pure product, or one very nearly pure."

THE great success of the Norfolk Virginian is emphasized by a detailed statement issued by its able publisher and editor, Mr. M. Glennan, showing the remarkable increase in circulation during 1891 as compared with previous years. The Virginian well deserves this success. If it had never done anything else to merit the favor of the people of Virginia than its recent fight to secure the settlement of the debt question it would deserve well of every friend of the Old Dominion, but this is only an illustration of the character of work which it is constantly doing. The MANUFACTURERS' RECORD extends its best wishes for the Virginian's prosperity.

The Virginia Debt.

(Financial Times, London.)

The settlement arrived at between the Olcott committee and the Virginia debt commission was not received with enthusiasm, but was merely accepted by the bondholders because they were tired of waiting, and saw no prospect of getting anything better even if they waited longer. We are very glad to see that the inadequacy of the terms offered to the British bondholders is recognized in the South, and that even yet all hope is not abandoned of supplementing them to some small extent. Business people there fully recognize that the prolonged default and the beggarly terms on which the State consented to terminate it will not soon be forgotten, and that while the memory of them is green they must seriously damage the prospects of legitimate Southern enterprises which find it necessary to apply to the British market for funds. The settlement being concluded, it is out of the question to reopen the negotiations, but it is satisfactory to learn that efforts will be made locally to obtain for the bondholders one concession which is not incompatible with the terms of the arrangement, and whose value, though largely sentimental, would not be altogether so. One of the editors of our esteemed contemporary, the MANUFACTURERS' RECORD, of Baltimore, a well-known and influential journal, to whose intimate acquaintance with Virginia and the Southern States generally we are frequently indebted, has written as follows to a correspondent in London: "I am going to try to bring such influence to bear on the Virginia legislature, through the creation of a public sentiment in that direction in the State, as will induce it to set aside an annual sinking fund of \$50,000, which with its interest increment should be continued until the debt was paid. Such a sinking fund, loaned out on gilt-edged securities at three per cent. per annum, would, in the ninetieth year, pay off all the debt as well as the expense of caring for the fund during that period. I do not know that it can be done, but I have submitted the scheme to one of the most influential men of the State, who was the first to create the public sentiment in favor of what is now the settlement, and he will probably take the initiative in the matter. Should the effort be a success, then your bondholders will feel that they have a solid security much more valuable than they now consider it. I hope, for the credit of Virginia and for the advancement of all classes of legitimate Southern schemes on the British market, as well as for my sympathy with the badly-treated bondholders, that this scheme will succeed."

Most heartily do we echo this wish, and we feel sure the bondholders will do so also. Virginia has not by any means regained the confidence of the British investor, and the proposed sinking fund, while involving a very small annual charge, would be a very valuable guarantee of good faith as regards the future. It would be one of the "cheap concessions" to which we referred as likely to be given "in order to make the scheme a little brighter to the badly-used bondholders." Virginia, whatever it may profess, is not so hard up that it cannot afford £10,000 a year, not in the shape of interest, but as a provision for its own scaled-down-capital obligations when they mature. Ninety years hence is a long way off, but it would undoubtedly be a great satisfaction to see a fund accumulating which even at the end of that long period would repay the bonds. The Virginia legislature of that date may be an honest one, but in view of past experience it would be distinctly reassuring to make the "bondholders feel that they have a solid security much more valuable than they now consider it," if all fear were removed of the State again declaring itself unable to meet its obligations when they matured.

DETAILED STATEMENT OF RAILWAY CONSTRUCTION IN THE SOUTH IN 1891.

The Railway Age in its last issue publishes a statement showing in detail the railway construction in the United States in 1891, and also adds to it the proposed extensions. The latter, however, does not include all extensions projected, but only those by railroads reported in the list as having laid new track last year. Thus, while the report is not full as to the outlook for railroad building this year, it is interesting as showing just what was done last year, and the MANUFACTURERS' RECORD gives the following summary relating to the Southern States:

Name of road.	From	Track laid in 1891.	To	Miles.	Proposed Extensions.	From	To	Miles.	Remarks.
MARYLAND.									
Gunpowder Valley.....	Hoffman	Hoffmanville		3	Hoffmanville.....	Rockdale		1.25	
WEST VIRGINIA.									
Charlestown Belt.....	at Charlestown			1	12 Pole River.....	Kenova		4	Under contract.
Huntington & Big Sandy.....	Huntington	12 Pole River		6	Boisevala e.....	Hallsville		113.5	Under construction.
Norfolk & Western.....	Kenova	Boisevala		48.5					
Mine Creek Branch.....	Eikora w.....	near Hallsville		21.5					
Stuart's Draft Branch.....				.50					
Russell Creek Branch.....				1.37					
Ravenwood, Spencer & Glen's.....	Ravenwood e.....	Spencer		33	Spencer e.....	Glenville		30	
Snowy Creek.....	Terra Alta n.....	Craneville		10					
West Virginia & Pittsburg.....	Burnsville s.....	Sutton		18.4					
West Va. Central & Pittsburg.....	Alton.....	Newlon		7.3	Newlon.....	Pickens		10	Graded.
Wheeling Bridge & Ter. Co.....	Gauley Junction.....	Elk River		8	Elk River.....	Gauley River		70	Graded.
	Elkins s.....	Beverly		17.5	Cumberland, Md.....	Baltimore		141	Partly graded.
	at Wheeling			2					
VIRGINIA.									
Bristol Belt Line.....	at Bristol			5					
Bristol, Elizabeth & Big Sandy.....	in Bristol			1.5					
Chesapeake & Ohio.....	5 miles from Bessemer	Craig City		21.5	Branch.....	on New River		4	Under contract.
Glasgow Belt Line.....	Covington w.....	Hot Springs		24.5	Branch.....	up Keeney Creek		5	Under contract.
Louisville & Nashville.....	at Glasgow			1.5					
Norfolk & Western.....	near Ewing e.....	Norton		45.67					
Roanoke Belt Line.....	End of track w.....	Norton		3.7					
Roanoke & Southern.....	at Roanoke			1.84					
Union Belt Line.....	N. Car. State line n.....	Roanoke		75.7					
	at Staunton			2.3					
NORTH CAROLINA.									
Asheville & Craggy Mountain.....	Asheville	Sunset Mountain		2.5	End of track.....	Craggy Mountain		3.5	
Lower Creek & Linville Valley.....	Lenoir	Apex		26.7					
Murfreesboro.....	Murfreesboro	Pendleton		6.5					
Richmond & Danville.....									
Yadkin Road.....	Ellisville s.....	Norwood		23					
Murphy Branch W. N. C. Rd.....	Wilkesborough s.....	Mocksville		9.8					
Wilming'n, Chad'n & Conway.....	Chadborn n w.....	Hub		12					
Wilmington & Weldon.....	Fayetteville	South		21.25					
	Rowland	North		8.75					
SOUTH CAROLINA.									
Ashley River (Char. & Sav.).....	Ashley Junction	Phosphate works		4					
Bishopville.....	Bishopville w.....	Lucknow		17					
Carolina Midland.....	Barwell s.....	Alendale		17					
Charleston, Sumter & Laurens.....	Sumter n e.....	Bennettsville		13.5					
Columbia, Newberry & Laurens.....	Laurens	Dover		106.85					
South Bound.....	Savannah River n.....	Columbia		106.85					
GEORGIA.									
Abbeville & Waycross.....	Bowen's Mills	Lulaville		5.5	Abbeville n w.....	Fort Valley		35	
Albany, Florida & Northern.....	Oakfield s w.....	Albany		18	Lulaville s e.....	Dapont		35	
Chattanooga Southern.....	State line	Pigeon Mountain		4					
Georgia Midland & Gulf.....	at Columbus			4					
Georgia, Carolina & Northern.....	Savannah River w.....	Jackson's Creek		95					
Indian Springs & Floriova.....	in Floriova			5					
Macon & Atlantic.....	Bruton	East		15					
Macon, Dublin & Savannah.....	Dry Branch e.....	Dublin		45					
Millen & Southern.....	Thrift n.....	Millen		11.5					
Savannah & Isle of Hope.....	Savannah	Thunderbolt		4					
South Bound.....	Melbard n.....	Savannah River		20					
Tifton & Northeastern.....	Tifton	near Irwinstville		13					
Wrightsville & Tennille.....	at Dublin			1					
FLORIDA.									
Ambler Road.....	Archer	Early Bird Mine		50					
Branches.....		Phosphate works		6					
Florida, Georgia & Western.....	Tallahassee w.....	Lake Como		11					
Silver Springs, Ocala & Gulf.....	Dunnellon s.....	Inverness		18					
South Florida.....	Pemberton Ferry	North		10					
Branch.....	Fla. South. Railway	Phosphoria		7.5					
Suwanee River Road.....	Louisville	Southeast		3.5					
ALABAMA.									
Blue Mountain Mineral.....	Jacksonville	North		4					
Chattanooga Southern.....	12 m. n of Gadsden	n. e. Georgia State line		43					
Mobile & Girard (Cent. of Ga.).....	Troy s w.....	Andalusia		51					
Nashville, Chattna. & St. Louis.....									
Tennessee & Coosa.....	End of track n.....	S. Guntersville		4.24					
Ohatchie Valley.....	Mines	toward Piedmont		3					
Savan., Americus & Mont.....	Chattahoochee R ver. West	Montgomery		12					
Seaboard of Alabama.....	Huntsboro w.....	Montgomery		60					
Tredgar Mineral.....	Sims' Chapel n w.....	Tuscarora		10					
	Tredgar Junction	Jacksonville		3					
LOUISIANA.									
Hou. C. Ark. & N. C. (Mo. Pac.).....	Riverton s.....	Alexandria		72.5					
Kansas City, Watkins & Gulf.....	10 m. n of L. Charles	North		50					
Louisiana Nickel Plate.....	Wadley	Allentown		2.5					
Louisville, N. O. & Texas.....	Lutcher	Blind River		6					
N. O., Ft. J. & Grand Isle.....	Socia s.....	Grand Bayou		1.4					
TENNESSEE.									
Bristol, Eliza. & N. Carolina.....	Bristol s.....	Keen's Summit		17.5					
Bristol Belt.....	at Bristol			5					
Harriman Coal & Iron.....	at Harriman			1.25					
Johnson City & Carolina.....	Dorr's Mills	Emberville		11					
Louisville & Nashville.....									
Nashville, Florence & Sheff'd.....	Summertown	Napier		11					
Clarksville Mineral Branch.....	Pond	North		11					
	Hematite s.....	Marion		13					
Vanleer Spur.....	Vanleer	Cumb. Furnace		6					
Louise Spur.....	Louise	Rainey		1.3					
Middlesboro & E. Tenn. Central.....	C. & N. Road	Hartsville		5					
Middlesboro Branch.....	Branch			27					
Morrisown & Cumb. Gap.....	Morrisown	Corrington		44					
Nashville & Knoxville.....	Cookeville	Chimney Springs		7					
Paducah, Tenn. & Alabama.....	Hazel, Ky.	Hollow Rock		38.6					
Union Belt Line.....	at Memphis			3.5					
Watauga Valley.....	Watauga	toward Wat'g Pt.		1.1					
KENTUCKY.									
Kentucky Union.....	Elkatawa	Inverness		3					
Middlesboro Branch.....	Branch up	Stony Fork		3.95					
Rich., Nich., Irvine & B.....	near Richmond	Irvine		23					
ARKANSAS.									
Camden & Alex. (Mo. Pac.).....	4 miles s of Camden	s. El Dorado		28.5					
Hope & Lewisville.....	Lewisville	North		7					
Mississippi & Little Rock.....	Lost Island w.....	Ross		20					
Prescott & Northwestern.....	Prescott s w.....	1/2 miles w Arcadia		7					
Texarkana & Fort Smith.....	Red River n.....	Ashdown		10					
St. Louis Southwestern.....		in Argenta		1.5					
TEXAS.									
Bonham Rapid Transit.....	at Bonham			3					
Port Worth & Rio Grande.....	Comanche s w.....	Brownwood		32					
Hearne & Brazos Valley.....	Hearne	Mumford		9					
Houston Belt & Magnolia Park.....	Houston	Magnolia Park		4					
Missouri, Kansas & Texas.....									
Dallas & Waco.....	Milford s.....	Hillsboro Junction		14.85					
San Antonio & Aransas Pass.....	Lexington n.....	Lot		59					
Texas, Louisiana & Eastern.....	Conros	East		8					
Tyler Star Lumber Co.....	Gilmer	Northwest		5					
Velasco Terminal.....	Velasco	Oyster Creek		7.4					

TRADE NOTES.

JOS. LABADIE, of the committee on manufactures of the Chamber of Commerce, Galveston, Texas, advertises for a practical tanner with capital to engage in the manufacture of leather in conjunction with a good company that has been organized.

THE announcement is made of the dissolution of copartnership existing between A. E. Colwell and D. W. Alderman operating as D. W. Alderman & Co., lumber manufacturers at Alcoln, S. C. D. W. Alderman continues the business, having purchased Mr. Colwell's interest, assuming the liabilities of the late firm.

A COAL-MINING property including 7,700 acres of coal and timber land in Pulaski county, Ky., is offered for sale through our advertising columns by Mr. H. B. Hull, of Marion, Va. The coal mine is fully equipped, and shows for 1891 an average profit, it is said, of fully \$1,497.50. Full particulars can be obtained from Mr. Hull.

THE Schneider & Trenkamp Co., manufacturers of the "Reliable" gas and gasoline stoves, of Cleveland, Ohio, has suffered a loss by fire in the burning of its factory buildings. By the 1st of March, it is thought, much of the damage will have been repaired, and the company ready to place their output upon the market for the season's trade.

THE firm of Hartford, Hebert & Co., consulting and contracting engineers, of Chattanooga, Tenn., was dissolved on January 1, 1892, and Col. R. F. Hartford, whose advertisement appears in another column, has opened an office in the Richardson Building in Chattanooga, and is prepared to give a supervision to construction work, make expert tests and examinations, and furnish plans, estimates and specifications. For the greater convenience of his clientele it is understood that offices will also be opened in Atlanta, Memphis and New Orleans, with which he will be in direct communication.

THE American Hoist & Derrick Co. (formerly the American Manufacturing Co.), of St. Paul, with a branch office at 48 S. Canal street, Chicago, manufactures hoisting engines, electric hoists, belt hoists, horse-power hoists, hand-power crab hoists, derrick irons, derricks, steam material elevators, horse material elevators, wire-rope blocks, wire-rope clips, and also handles as agent many other appliances and tools needed by contractors. The company has just issued its 1892 catalogue, covering very fully in its illustrations and descriptions the whole line of machinery manufactured and handled as agent by it. Contractors will find this catalogue of great interest.

IN the advertising columns of this issue is found the announcement of a tract of land in Berkeley county, S. C. The tract comprises 2,394 acres, 500 being cleared, 904 swamp land and the balance highland. About 1,894 acres are covered with woods, mostly well-grown trees, suitable for lumbering, and consisting of oaks, cypress, pine, ash, holly, tupelo, hickory, etc. The soil is rich, yielding large crops of corn, cotton, rice, etc. The place is suitable for planting, lumbering or stock-raising; is well stocked with game, deer and birds. It is situated about 50 miles from Charleston, S. C.; about 12 miles from St. Stephen's Depot, on the N. E. R. R.; 15 miles from Eutawville, on C. S. & N. R. R., and 3 1/2 miles from the steamboat landing on the Santee river, from which point boats run to Charleston. The titles to this property are said to be perfect, with no encumbrances of any character. For a detailed description or any information pertaining to the property address Gaston Hardy, 12 Broad street, Charleston, S. C.

200 Byram - Colliau Cupolas



FOR DELIVERY IN '92.

To accomplish this we have great'y

REDUCED PRICES.

Prove this by writing to

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IRON WORKS,
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U. S. A.

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of every description. I have just issued my 25th Annual Fall Catalogue of Roof Cresting, Tower Ornaments, Finials, Weather Vanes, Stable Fixtures, Stall Guards, Hay Racks, Oat Mangers, Gutters; also Window Guards, Balcony Railings, Jail Cell Work and Ornamental Brass, Wire, Iron and Bronze Work of every kind; Office and Counter Railings of Latest Design. I ship goods all over the U. S., and fill orders from measurements sent by mail. Catalogue free.

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Write for our beautiful 144
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BEST YORKSHIRE BAR IRON,

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USED BY LEADING RAILROADS.

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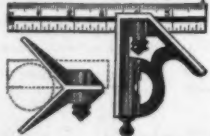
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Skilled mechanics prefer them.
Live dealers sell them. Send
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SOMETHING NEW.—How to Cover Palways
with Leather and make Belts Endless. Write
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VENTILATING FANS

Will Keep Your Place

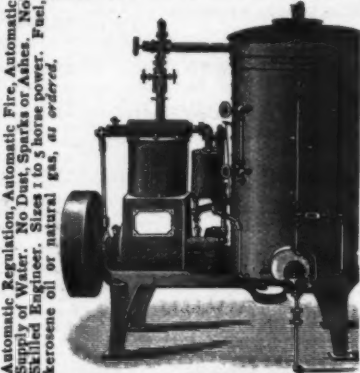
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Sole Builders. ROCHESTER, N. Y.
Send for Illustrated Catalogue.

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The only Automatic Injector that is operated entirely without the use of any globe valves.

TO START—Open Valve K.
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It can be used either as a lifter or non-lifter. It is adopted by the largest Engine Builders, and is for sale by the LARGEST SUPPLY HOUSES IN THE U. S.

Ask your dealer or send to us for circular and prices.

JENKINS BROS., 71 John St., New York.

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HOW TO SELECT, LAY
AND PAINT A

TIN ROOF.

SENT FREE OF COST.

MERCHANT & CO.

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KANSAS CITY.

THE FALLS HEATER PRICE \$1.50

The Most Economical Heater in Existence.

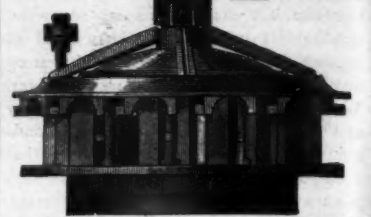


In conjunction with a center draft lamp heats Bath-rooms, Offices, Bedrooms, Dining Rooms, Sitting Rooms, Parlors, &c.; also lights them at same time. OVER 10,000 SOLD THIS WINTER IN ONE CITY ALONE. Sales increasing rapidly everywhere. Money refunded if not satisfactory. Cheerful and healthful. Cause of the gripe and most other ailments is cold and dampness. This Heater dispels same. Every house has some cold room. We sell a Lamp, the finest made for \$2.00, including chimney, shade and shade-holder. We manufacture the Climax Cellar Drainer, which automatically drains Cellars, Wheel Pits, &c.; it lifts the water. Also Climax Gas Machine, makes a brilliant gas light at cost of 75 cents per 1,000 cubic feet; lights the smallest home or largest institution.

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Water Wheel.



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For Paper, Cotton and Grist Mills.

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Dwarfs in Size, but
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Expense one cent an hour per horse power and requires but little attention to run them.
Every Engine
Guaranteed. Full
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GAS & GASOLINE ENGINE CO. Cincinnati, O.

MULLER LATHES

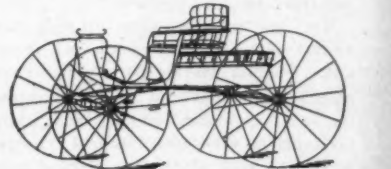


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Of Every Description.

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SWINGING HOSE RACK
HOSE FITTINGS

Stow Flexible Shaft

Invented and Manufactured by the
STOW MFG. CO.
Binghamton, N. Y.
Established in 1875.
For Tapping and Reaming Stay Bolt Holes in
BOILERS.
Portable Drilling.

What does he see?

This gentleman, after having spent a pleasant hour peering through a crack, has just seen a boy post up on the far-side of this enclosure the following sententious and soul-satisfying announcement:

SPECIAL ANNOUNCEMENT!

The Management regret to announce that the Exhibition promised for this day has been unavoidably postponed ONE WEEK, to enable them to make such repairs to the fence enclosing these grounds as will secure the privacy essential to the success of their enterprise.
P. R. O'CRATINATOR, Supt.
All Tickets will be redeemed at the office.

Consoled by the thought that the time lost was not his—he works by the day on a job in the immediate neighborhood—the gentleman slowly removes his eye and retires, with the fixed determination of being here again next week. Not that he cares an atom to know what is to be shown next week on this spot, but simply does not intend to have his curiosity excited for nothing.

AS A MATTER OF FACT
VERY FEW ARE SATISFIED WHEN
THEIR CURIOSITY IS NOT.



G. L. Stuebner & Co.

Successors to Stuebner & Woods, -
MANUFACTURERS OF
Self-Dumping Steel and Iron Hoisting Tubs,
Side and Bottom Dumping Cars for Coal Elevators, Iron Wheelbarrows, Hoisting Blocks, Bottom-dumping Tubs for Coaling Locomotives, &c.
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Send for circular and prices.

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ESTIMATES & CATALOGUES FREE

PATENT VENETIAN BLINDS AND METALLIC WINDOW SCREENS.
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Sliding Blinds and Screens.
The "Willer" Sliding Blinds are made in sections to slide vertically, are balanced by springs, contain Rolling Slats wherever wanted and are furnished complete, including finish and hardware.
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The "Willer" Screen Doors are noted for their unique and tasty designs and their superior quality of workmanship.
ALL GOODS MADE TO ORDER ONLY.
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Patterns made to order for Machinery, Stove and Architectural Work. Metal Letters made and a large stock always on hand.
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Manufactured by THE WHITMAN & BARNES MFG. CO., Syracuse, N. Y.
Automatic governor, non-explosive boiler, no extra insurance, no sparks, ashes or smoke. Specially designed for those wanting power from 2 to 5 h.p. This is the safest, cheapest and most reliable power known. Fuel—kerosene oil or natural gas.

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Repeated tests prove that it is absolutely Non-Explosive and the most Durable ever made. Strong testimonials from hundreds of users, in all parts of the country.
Sizes 10 to 1,000 H. P.
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Boilers, Stacks, Tanks and Sheet Iron Works. Steam Fittings of all kinds.
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Agents for Gilbert's Universal Wood Split Pulley.

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PATENT LEVER FLUE CLEANER
is the best in the market. Why? Because the ends are protected from breakage by the button; its native flexibility entirely supercedes the old springs; the only cleaner with a follower to remove the refuse. Quicker and more easily adjusted than any other; better made; does better work; lasts longer.
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For Heating Soldering Coppr rs.
Saves Insurance and Fire Risks. Economical and Reliable. Always ready for use. Write for circular to R. U. CONANT,
MANUFACTURER AND DEALER IN
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Fine Plumbing and Ventilating.
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Manufacturers of
FLEXIBLE SHAFTS,
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It surpasses other power hammers in durability, speed and quality of work.

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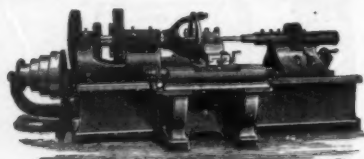
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Both Straight and Crowning Face, Cone Pulleys, Gear Blanks and a Variety of Other Work.

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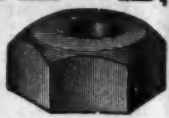
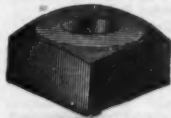


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MADE IN SOLID DIES.

COLD PUNCHED, CHAMFERED, TRIMMED AND DRILLED SQUARE AND HEXAGON NUTS.



BRIDGE, SHIP

Tank and Coopers'

RIVETS.

WASHERS,

Split and Single

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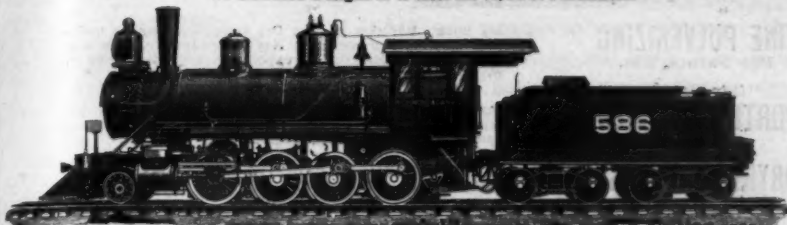
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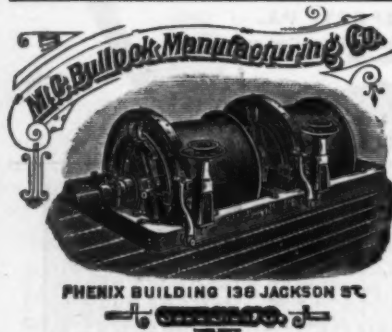
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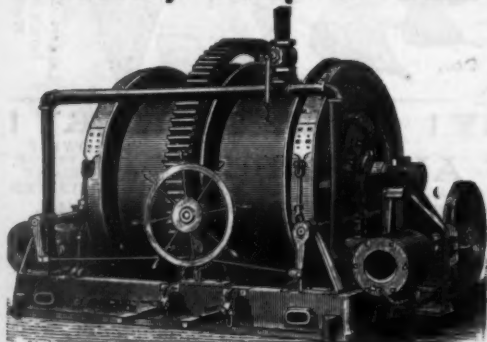
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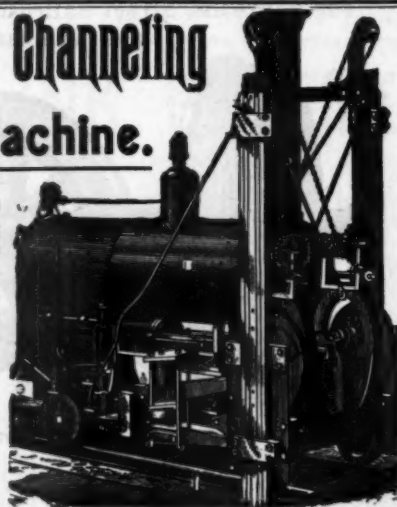
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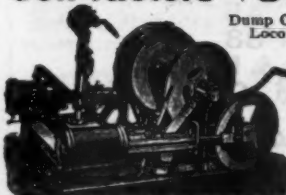
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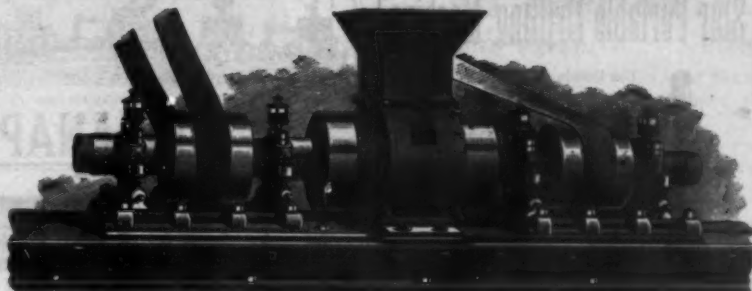


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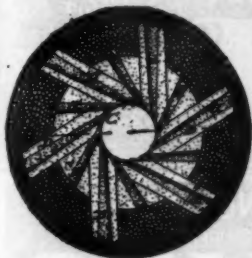
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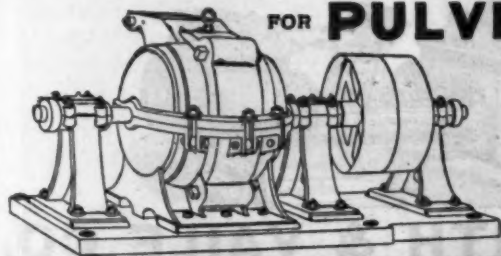
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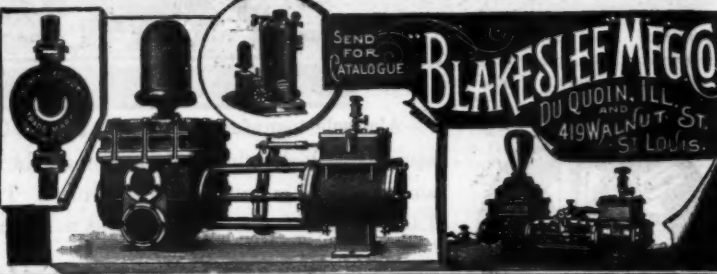
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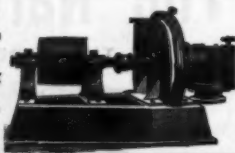
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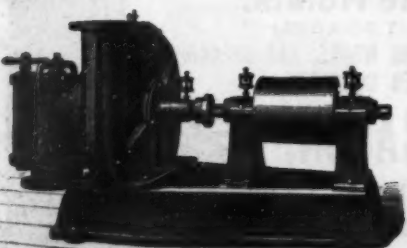
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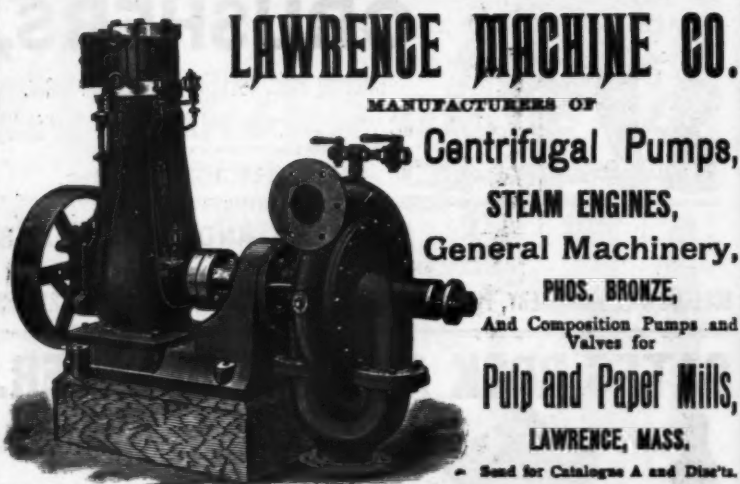
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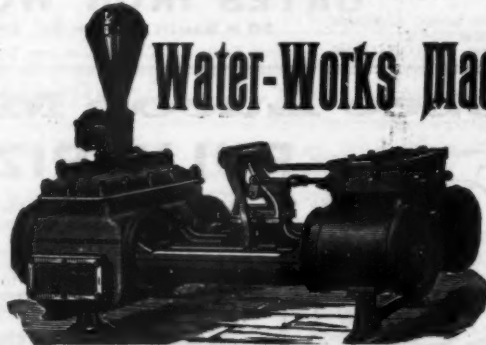
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40-inch	16.49	148.33	89.53
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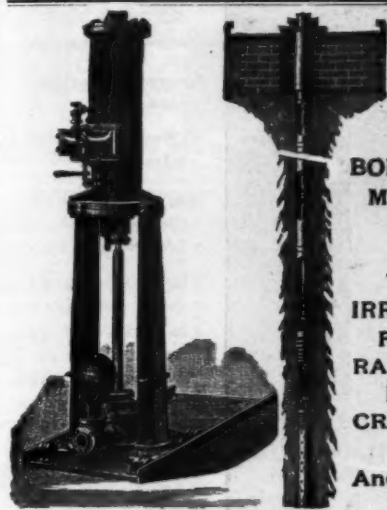
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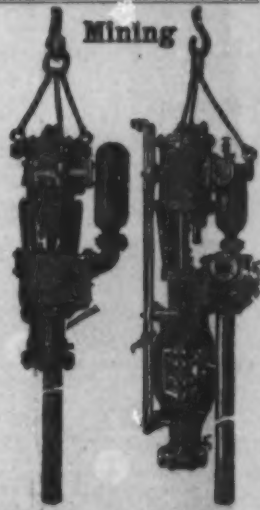
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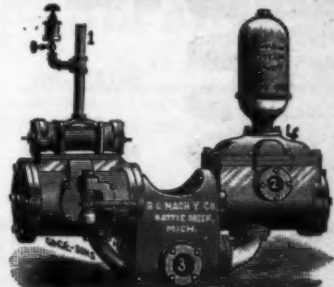
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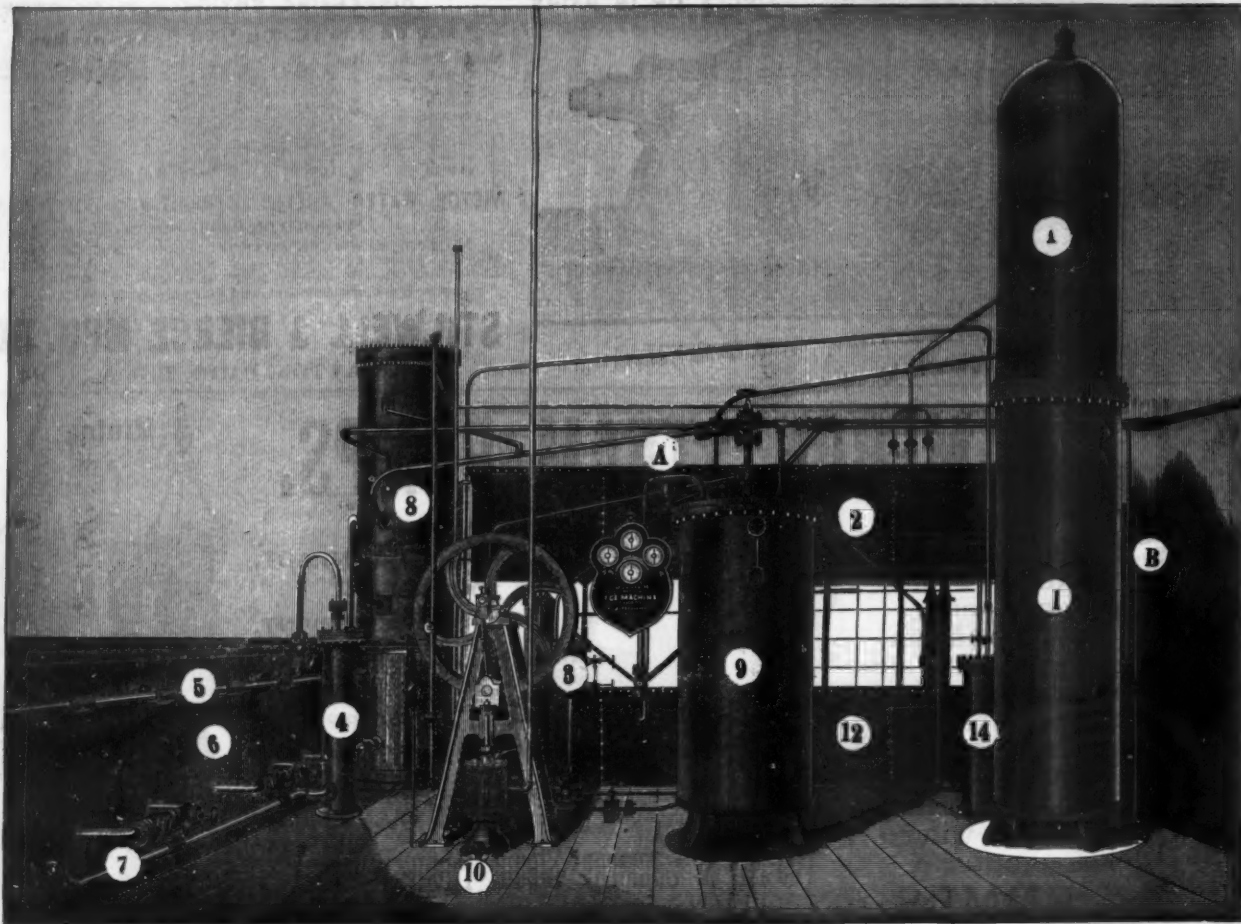
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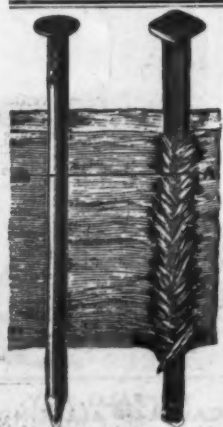
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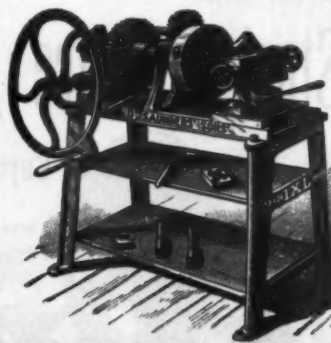
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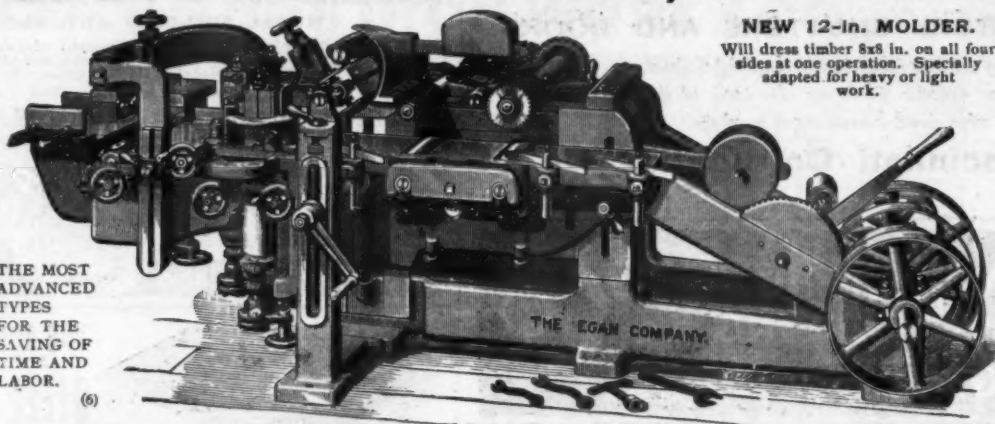
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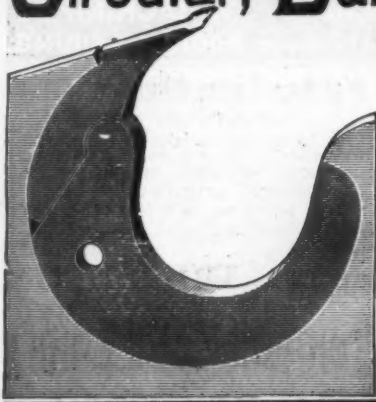
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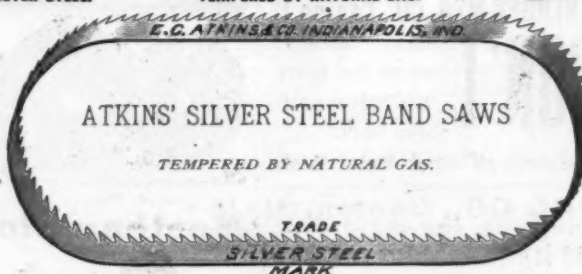
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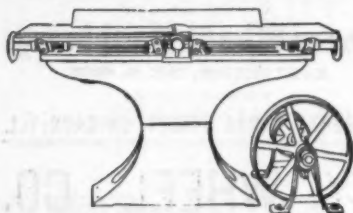
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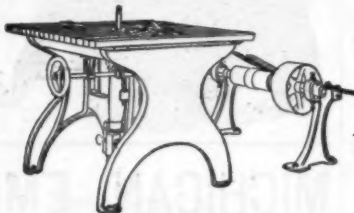
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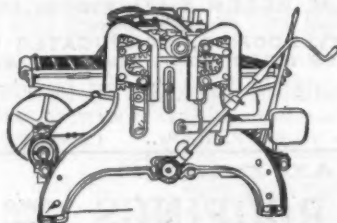
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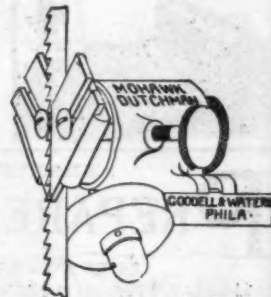
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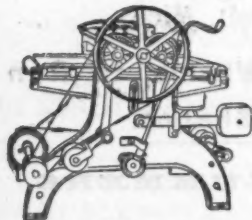
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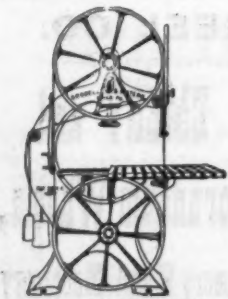
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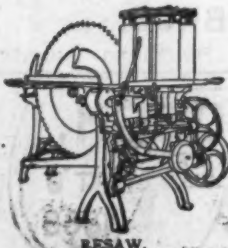
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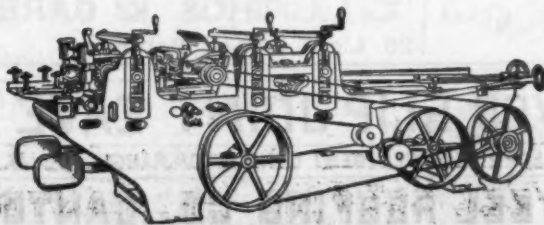
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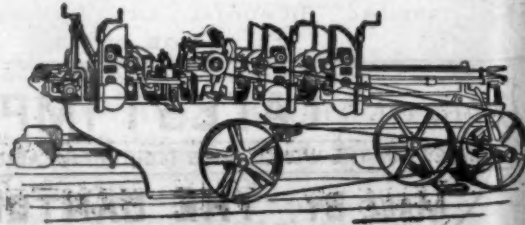
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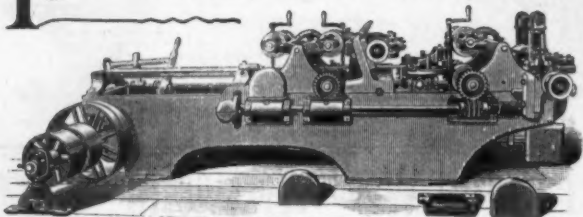
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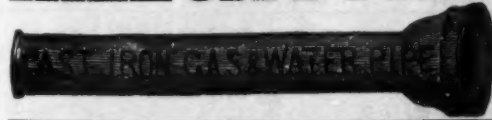
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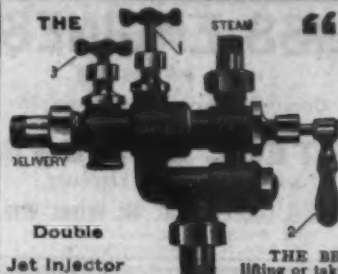
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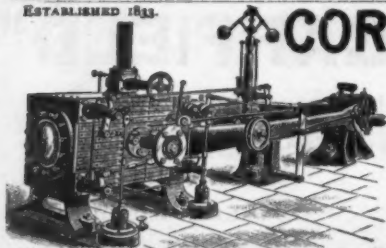
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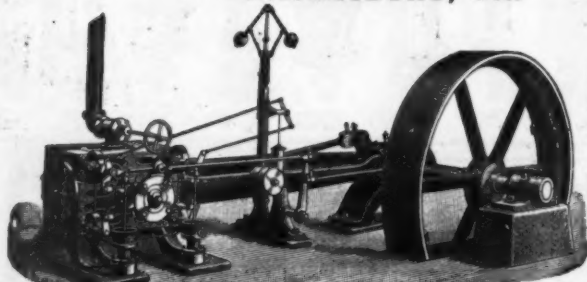
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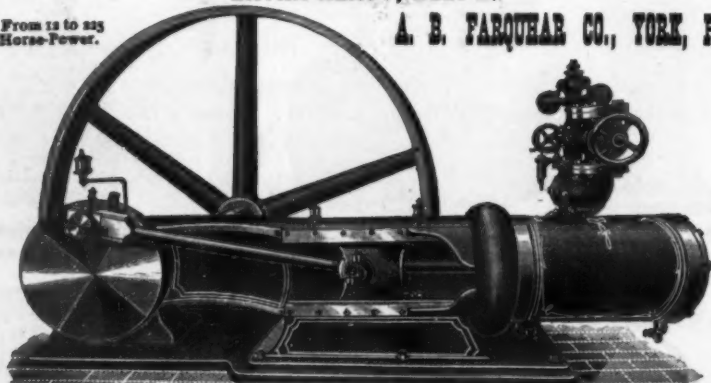
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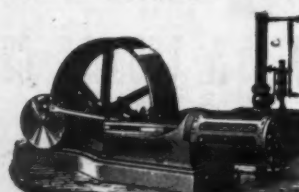
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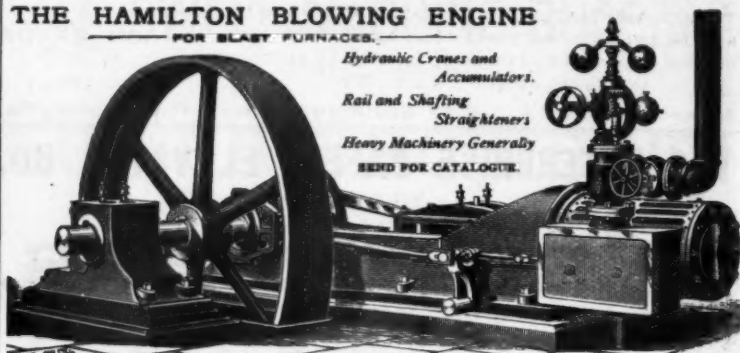
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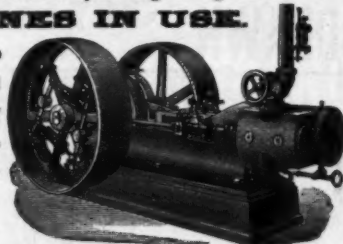
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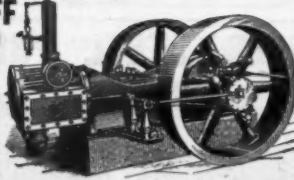
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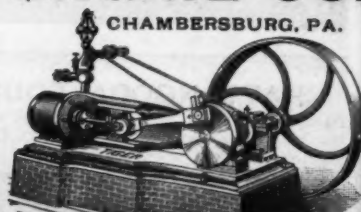
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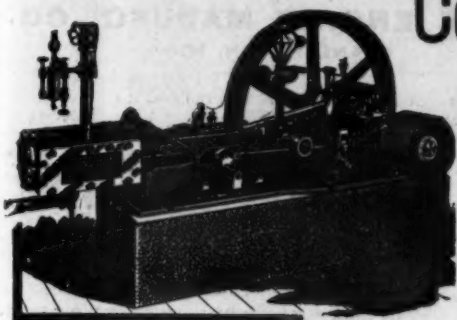


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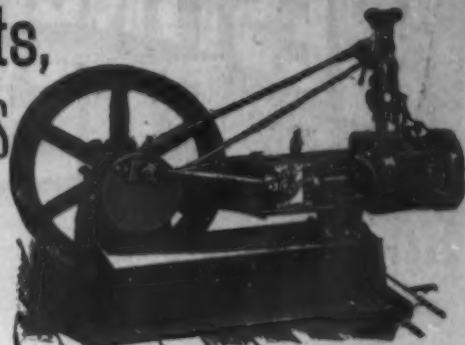
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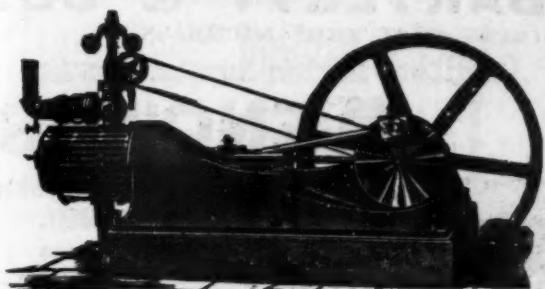
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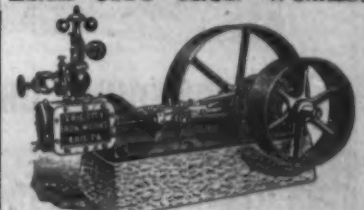
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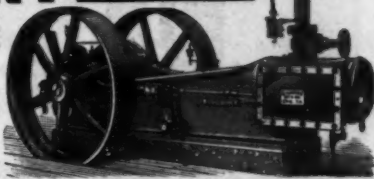
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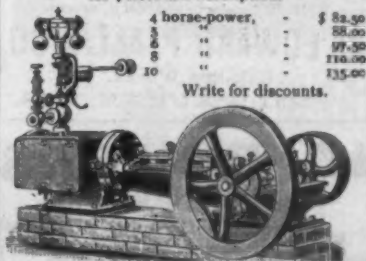
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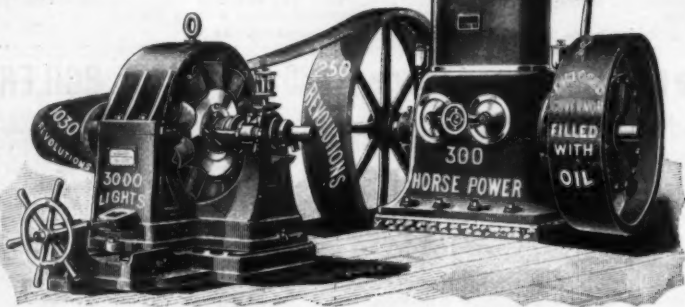
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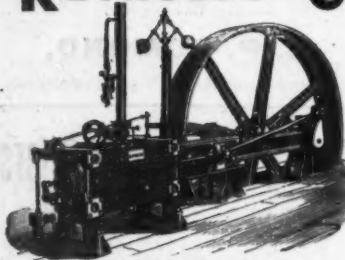
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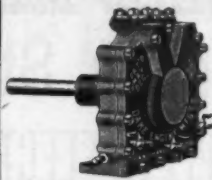
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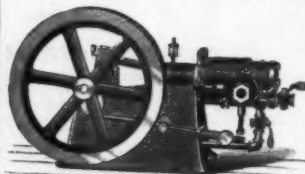
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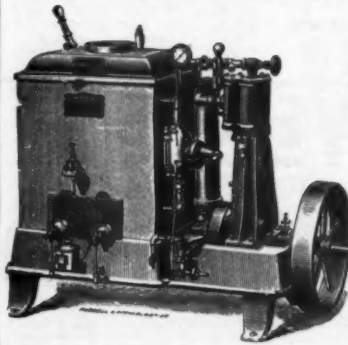
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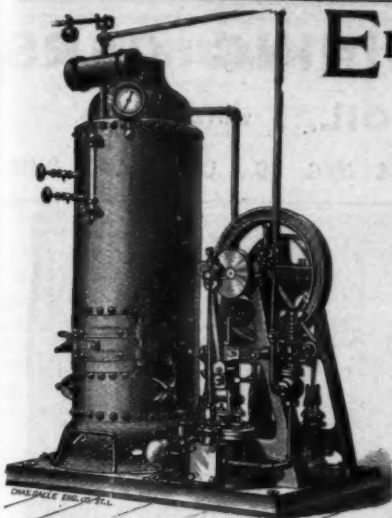
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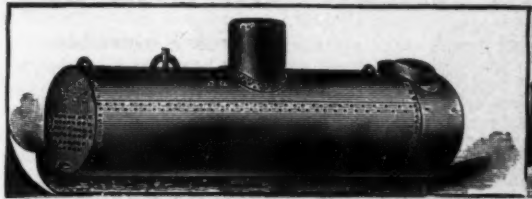
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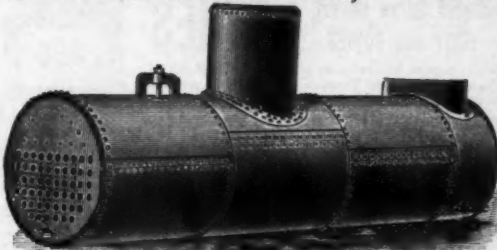
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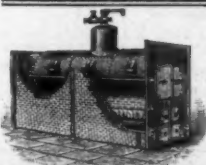
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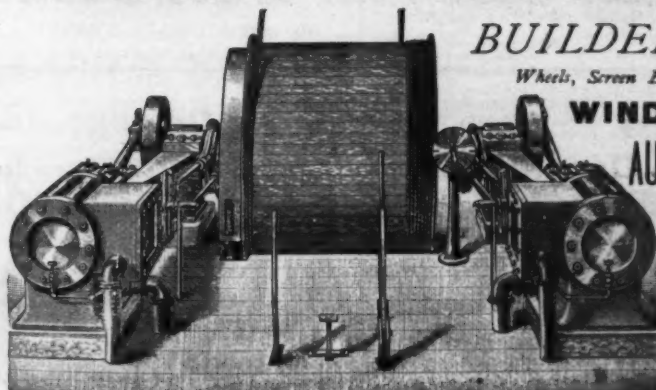
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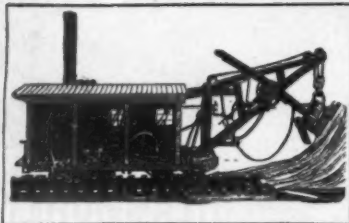
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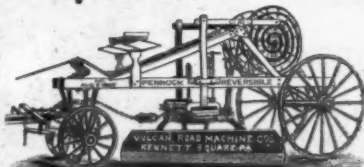
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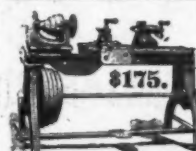
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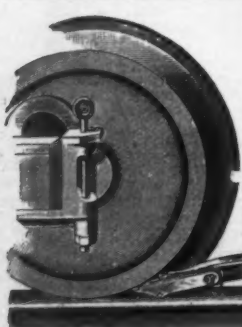
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What the Chamber of Commerce
Is Doing to Attract Outside
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[Special Cor. MANUFACTURERS' RECORD.]

NORTH CAROLINA HEADQUARTERS
OF THE MANUFACTURERS' RECORD,
WINSTON-SALEM, N. C., Jan. 25, 1892.

The Chamber of Commerce here had a meeting last week of more importance than any which that body has held for a long time. There was a good attendance, and a spirit of enthusiasm and enterprise was manifested in a marked degree. It was such a meeting as used to be held in the days when railroads were wanted here, and when every shoulder was put to the wheel and every enterprise sought after was secured. There were the awakening, the enthusiasm and the determination which are necessary to the accomplishment of any desired purpose, and which, when closely following on the heels of such extensive development, such remarkable advancement and such liberal advertising as Winston-Salem has enjoyed during the past year, are certain to produce far reaching results and the greatest possible degree of advantage over less enterprising localities.

The great activity in Winston-Salem, its industrial importance and its solidity and inevitably great future, were dwelt upon by many of the speakers of the occasion, and the importance of concerted and united action along certain lines of development were elaborated and dwelt upon with emphasis. It was decided that the Chamber of Commerce should do everything within its power to encourage diversified industries, both small and large, to the end that the already important position Winston-Salem occupies as a manufacturing center may be greatly broadened and increased. With very little of the right kind of effort Winston may be made the greatest plug-tobacco-making point in America, for here is the center of the region in which grows the finest leaf known for chewing purposes, and Winston already has a larger number of plug-tobacco factories than any other city in the country. It only remains for the proper effort to be put forth to make the already great output of manufactured tobacco increase till it exceeds that of the great houses of Jersey City, St. Louis and elsewhere. But in other lines of manufactures as well the field is so promising a one that the members of the Chamber of Commerce propose to strongly present the advantages of this location to capitalists and industrial workers abroad. Cotton mills, woolen mills, wagon works and woodworking establishments of various kinds all do so excellently well here that the suggestions of possibilities in these lines are well-nigh innumerable. Committees were appointed by the Chamber to properly take hold of this matter and to formulate plans, make suggestions and actively forward the interests of the city in this direction.

A committee was also appointed to urge on Congress the importance and the justice of a federal building here. On toward a million dollars a year is paid out here for revenue stamps for manufactured tobacco alone, and the postoffice business here is also an important one. And yet no city of the size of Winston-Salem, doing the amount of government business yearly which she does, is left so wholly unprovided with facilities for handling such business.

As showing the broad spirit of enterprise which characterized the meeting, a resolution was adopted requesting the North Carolina delegation in Congress to do all in their power to assist Savannah in securing the government appropriation for deepening the harbor at Savannah, in accordance with the comprehensive plans

outlined by the engineer in charge of the work at Savannah.

Other towns may well continue to take lessons from the enterprise of Winston-Salem, for it can be set down as an evident fact that it is her bold determination to make the census returns of the next decade show as remarkable a development as that which was revealed by the returns from this place for the reports embodied in the census of 1890.

ALBERT PHENIS.

Railroad Construction

Austin, Texas.—Electrical Railroad.—John W. Hoyt, of New York, and others contemplate constructing a rapid transit street railway, as stated lately, and they have applied to the city council for authority to do so. It is believed the road will be built to be operated by dummy, and later by electricity.

Baltimore, Md.—Cable or Electrical Railroad.—The Baltimore Union Passenger Railway Co. has applied to the legislature for authority to use the cable or electrical system to operate its street railways.

Braidentown, Fla.—Railroad.—Contract for the construction of 80 miles of the Arcadia, Lakeland & Gulf Railroad, recently referred to, has been let to Gaborry, Armstrong & Co. This section is expected to be completed by the first of June.

Columbus, Miss.—Dummy Line.—The Columbus Street Railway & Power Co., lately reported as organized with E. Cahn, president, and C. E. Rodenburg, secretary, has let contract for the construction of its dummy line. The road is to be 3½ miles long, and 3 additional miles will be built next fall. N. M. Brandon, of Meridian, Miss., is chief engineer and contractor.

Fairmont, W. Va.—Railroad.—The Baltimore & Ohio Railroad Co. (office, Baltimore, Md.) is reported as to build a second track from Fairmont to Gaston, a distance of four miles.

Glenn Springs, S. C.—Railroad.—The Glenn Springs Railroad Co., previously referred to, proposes to commence work on its road at or near Delta, on the Georgia, Carolina & Northern Railroad, and build via West Springs to Glenn Springs. It is ultimately expected to continue the road from Glen Springs to Spartanburg, Goshen Hill, Newberry C. H. and Batesburg. The company intends issuing bonds at the rate of \$16,000 a mile to build and equip its road. Harvey S. Simpson is president of the company, and can be addressed for particulars.

Greensboro, N. C.—Street Railway.—The Greensboro Street Railway Co., referred to last week, is now having a survey of its road made, so that definite propositions can be entertained for its construction.

Hinton, W. Va.—Railroad.—J. H. Miller is president; J. C. James, vice-president, and J. Alex. Parker, secretary, of the Hinton & New River Railroad Co., reported last week as having completed its organization. They expect to commence surveys very soon, and as soon as arrangements can be made build the road.

Jonesville, S. C.—Railroad.—The election of Jonesville and Pickney townships to vote on a subscription of \$30,000 each to the Jonesville & Lockhart Shoals Railroad Co., mentioned last week, will be held on February 16th. If the subscription is voted, and it doubtless will be, the company will build a railroad 15 miles long from Jonesville to Lockhart Shoals.

Kensington, Md.—Railroad.—The Baltimore & Ohio Railroad Co. (office, Baltimore, Md.) has let contract to Allen & Co., of Frederick, for the double-tracking of its road from Kensington to Rockville, previously reported.

Knoxville, Tenn.—Railroad Bridge.—Hall & Hough have received contract at \$20,000 for the grading of the approaches to the bridge for the Marietta & North Georgia Railroad (office, Marietta, Ga.) to be built across the Tennessee river.

Llano, Texas.—Railroad.—Ricker, Lee & Co., of Galveston, have received contract to build the Llano extension of the Austin & Northwestern Railroad (office, Austin) from Fairland to Llano.

Luverne, Ala.—Railroad.—The report of the contract for grading 60 miles of the Alabama Midland Railroad, lately reported, is not confirmed.

Lynchburg, Va.—Electrical Railroad.—The Rivermont Electric Railway Co. contemplates the extension of its railroad to a point somewhere in Diamond Hill.

Marietta, Ga.—Electrical Railroad.—The Collins Park & Belt Railroad Co., chartered by the legislature, proposes to build an electrical railroad from Marietta to Bolton.

Memphis, Tenn.—Railroad.—C. H. Organ, C. B. Bryan, C. W. Hunter and others (as directors) have incorporated the West Memphis Railway Co. to construct a railroad 1½ miles in length in West Memphis. The capital stock is \$100,000.

Montgomery, Ala.—Electrical Railroad.—Paul W. Smith, mentioned last week as having, with

others, obtained franchise to construct an electrical railroad, states that they intend to build and operate from 10 to 15 miles of road and equip electrically. What system they will adopt has not yet been decided.

Montgomery, Ala.—Electrical Railroad.—A. W. Le Bron, R. P. Dexter and Phares Coleman have petitioned the city council for a franchise to construct an electrical street railroad.

New Berne, N. C.—Electrical Railroad.—Wm. C. Clarke, of Wakefield, R. I., writes as follows to the MANUFACTURERS' RECORD concerning the electrical railroad previously mentioned: "I shall commence work some time the coming spring on the electric railway at New Berne. I am the sole owner of the franchise, which runs for 30 years."

Norfolk, Va.—Railroad.—A bill incorporating the Norfolk & Camden Railroad has passed the legislature.

Orange C. H., Va.—Railroad.—It is reported that a syndicate is being organized in order to complete the Orange & Keyville Railroad to Keyville. Efforts are being made to secure a 6-months extension from the board of supervisors of Prince Edward county of the time for the completion of the road, in order to secure the bonds voted it.

Perryville, Tenn.—Railroad.—Eastern capitalists are said to be negotiating for the purchase of the Tennessee Midland Railroad (office, Memphis) with a view of extending it to Nashville. The road is in operation to Perryville, a distance of 133½ miles, and is projected to the Virginia State line, a total distance of about 515 miles.

Prescott, Ark.—Railroad.—The Prescott & Northwestern Railway Co., which extends from Prescott into Hempstead county, has been reorganized and incorporated with Benjamin Whitaker, of Texarkana, Texas, president; W. B. Waller, vice-president, and J. C. Young, secretary. It is proposed to extend the road through Hemstead into Pike county. Capital stock of company, \$30,000.

Quanah, Texas.—Railroad.—The Quanah & Oklahoma Railway has been chartered by Jas. S. Clarkson, G. M. Dodge and others. It is stated that this road will be built from Fort Worth to Quanah, and thence across Greer county through Oklahoma Territory.

Richmond, Va.—Street Railway.—A bill incorporating the Tazewell Street Railway Co. has passed the legislature.

Rome, Ga.—Electrical Railroad.—Contract has been let to the Thomson-Houston Electric Co., of Boston, Mass., for the construction of the Rome electrical street railroad recently referred to.

Savannah, Ga.—Electrical Railroad.—The City & Suburban Railroad Co., J. H. Johnston, president, contemplates a change of power for operating its road to electricity.

Savannah, Ga.—Railroad.—At the Seaboard Co.'s annual meeting resolutions were passed as authorizing the directors to complete the Middle Georgia & Atlantic Railroad from Machen to Covington. It is also proposed to build a branch road from New Berne to Social Circle.

Shendun, Va.—Railroad.—The bill incorporating the Chesapeake, Shendun & Western Railroad Co. has passed the legislature and been signed by the governor, thus becoming a law.

Shreveport, La.—Railroad Bridge.—It is reported that the St. Louis Southwestern Railroad (office, St. Louis, Mo.) will construct a \$300,000 railroad bridge across the Red river.

Spencer, W. Va.—Railroad.—The Ravenswood, Spencer & Glenville Railroad will be extended, it is stated, to a connection with the West Virginia Central & Pittsburg at Barnesville.

Texarkana, Ark.—Street Railway.—G. B. Abercrombie, of Houghton, La., and others will probably build the street railway lately referred to.

Trinity, Texas.—The Trinity, Cameron & Western Railroad, referred to in our last issue, has been chartered by E. P. Walker, J. P. Jordan, Henry Mitchell and others, with a capital stock of \$300,000. This road is to be built from Trinity to Granger (130 miles), and the survey has been completed.

Vicksburg, Miss.—Electrical Railroad.—A bill to incorporate the Vicksburg Electric Street Railway has been introduced in the legislature.

Wadesboro, N. C.—Railroad.—The Atlantic Coast Line (general office, Wilmington) will probably, it is said, build a railroad from Wadesboro to Thomasville.

Wheeling, W. Va.—Street Railway.—The Mozart Park Association is considering, as stated last week, the construction of a street railway to Mozart Park.

Wilmington, N. C.—Electrical Railroad.—The New York syndicate, lately reported as having completed its purchase of the Wilmington Street Railway, has organized with E. L. Hawks, of Winston, as president; J. H. Barnard, of Asheville, vice-president, and B. F. O'Connor, of New York, secretary. The purchase price was \$100,000, \$75,000 of which was paid in cash. Arrangements will be pushed for changing the road to electrical power. Main office of company is Broadway, New York city.

Building Notes.

Alexandria, Va.—The Baptist Church is reported as to build a parsonage. O. J. Jackson can give information.

Augusta, Ga.—Warehouse.—Architect Zeigler is preparing plans for the erection of a two-story warehouse, 160,000 feet, for Paul Mustin & Co.

Augusta, Ga.—L. F. Goodrich has prepared plans, it is stated, for the erection of a three-story store building for J. E. White.

Berryville, Va.—Jail.—The county supervisors have determined upon the erection of a jail building in Berryville. The county clerk can give particulars.

Bowman, Ga.—College.—A \$10,000 Baptist institute will be erected in Bowman during the summer. For information address W. H. King.

Bridgeport, Ala.—School Building.—A. H. Gould has submitted plans for the erection of the school building reported in last issue, to cost \$15,000.

Broadway, Va.—Depot.—It is rumored that the Baltimore & Ohio Railroad Co. (office, Baltimore, Md.) will build a depot in Broadway.

Camilla, Ga.—School Building.—The city will erect a school academy. The mayor can give information.

Cartersville, Ga.—Gassett & Patterson will, it is reported, build a two-story brick business house.

Cockeysville, Md.—Church.—The Methodist Episcopalals contemplate building a church. Rev. Thomas Wood can give information.

Columbus, Ga.—Jail.—L. F. Garrard will receive proposals until April 5 for the erection and completion of the jail lately reported for Muscogee county.

Crowell, Texas.—Courthouse.—The county clerk will receive proposals until February 1 for the erection of a courthouse for Foard county to cost \$5,000.

Dallas, Texas.—The following building permits have been issued: Lefurich & Jamison, a brick and iron building to cost \$7,000; Middleton Bros., a three-story brick building to cost \$10,000; H. Mirah, a two-story building to cost \$5,000, and Madden & Bessard, a two-story brick building to cost \$5,000.

Dawson, Ga.—Terrell county will build a courthouse. Address county clerk for information.

Durham, N. C.—Church.—The members of Trinity Church will probably build an edifice to cost \$50,000.

Ellisville, Miss.—School Building.—The erection of a school building is contemplated. The mayor can give information.

Elora, Ala.—Hotel.—It is stated that an addition is to be built to the Elora House.

Fortress Monroe, Va.—John W. Pullman will receive proposals until February 4 for the construction of two double sets of non-commissioned officers' quarters at Fortress Monroe.

Franklin, N. C.—Hotel.—The erection of a hotel is proposed. The secretary of the Board of Trade can give information.

Galveston, Texas.—H. C. Cooke & Co. are preparing plans for the erection of a residence at Nottingham for R. Behrens to cost \$3,000.

Galveston, Texas.—School Building.—N. J. Clayton & Co. are preparing plans for the erection of the building lately reported for St. Mary's Parochial School. It is to be two stories high, 120,128 feet, and will cost about \$30,000.

Galveston, Texas.—W. J. Edbrooke, supervising architect, Washington, D. C., will receive sealed proposals until February 18 for all the labor and materials required for the approaches to the United States custom-house building at Galveston, Texas, in accordance with drawings and specifications, copies of which may be had on application.

Galveston, Texas.—College.—Clayton & Co. have prepared plans for the erection of a four-story academy building 90,240 feet, to cost \$30,000, for females.

Hagerstown, Md.—Berger Bros. have, it is stated, been awarded contract for the erection of a double two-story brick dwelling for John Fisher.

Haakell, Texas.—Bank Building.—It is stated that contract has been awarded for rebuilding the Haakell National Bank, recently burned.

Haakell, Texas.—Dodson & Haley have awarded contract, it is stated, for the erection of a building to replace the one lately burned.

Hennington, W. Va.—Jail.—The erection of a jail building, to cost \$30,000, is proposed by Cabell county. The county clerk can give information.

Jacksonville, Fla.—Hall.—The colored Masons will probably erect a hall building to cost \$20,000.

Johnson City, Tenn.—W. T. Painter will, it is stated, build a residence.

Jonesboro, Ark.—Opera house.—It is said that an Eastern capitalist has made the citizens a proposition to erect an opera-house.

Kountze, Texas.—Jail.—The plans and specifica-

tions of the Pauley Jail Building Co., of St. Louis, Mo., have been adopted for the erection of the jail lately reported for Harden county.

Little Rock, Ark.—J. R. Miller is reported as to erect a four-story business building.

Marietta, Ga.—Bank Building.—It is stated that L. Black & Son have secured contract for the erection of the two-story building, lately reported, for the Marietta Trust & Banking Co.

Morganfield, Ky.—School Building.—H. Mursina, of Evansville, is preparing plans and specifications for the school building lately referred to; its estimated cost is \$10,000.

Moundsville, W. Va.—It is reported that Frank Taylor has awarded contract for the erection of a residence.

Mount Pleasant, Texas.—Bank Building and Opera house.—The Mount Pleasant Bank will, it is reported, erect a bank building and opera-house. Plans and specifications are said to be completed.

Nashville, Tenn.—The following building permits have recently been issued: To O. Noel to rebuild the Noel block, to cost \$25,000; to A. J. Warren, for a five-story brick business house to cost \$16,000; to J. M. Head, for a five-story brick business house to cost \$15,000, and to the Phillips-Buttort Manufacturing Co., for a four-story brick business house to cost \$25,000.

Newport News, Va.—Architect Teague has prepared plans for the erection of a three-story brick business house for W. J. Nelms, D. S. Jones and others.

Newport News, Va.—Dr. Lockard is reported as to erect a three-story brick buildings, and Contractor Lameroux as having awarded contract for the erection of a three-story brick buildings.

Newport News, Va.—The Home Building & Investment Co. has been incorporated with T. Livezey, president, and W. I. Fitzsimmons, secretary and treasurer. The authorized capital stock is \$100,000.

Norfolk, Va.—Hall Building.—The Benevolent Protective Order of Elks contemplates erecting a hall building.

Ocoee, Fla.—Church.—The Episcopalians are reported as to build a church.

Oxford, N. C.—Hotel.—It is stated that J. C. Hundley and others will probably form a company to build a hotel.

Radford, Va.—College.—Geo. W. Miles will erect at once a large "St. Abans" college for boys, at a cost of \$30,000.

San Antonio, Texas.—Exposition Building.—Gordon & Laub have prepared plans for the erection of a building for the State of Texas on the Columbian Exposition grounds.

San Antonio, Texas.—Gordon & Laub are preparing plans for the erection of a residence for T. W. Mulaly to cost \$6,000.

Searcy, Ark.—Church.—A church building will probably be erected in West Searcy. Rev. J. M. Talkington can give information.

Spartanburg, S. C.—College.—Messrs. Bruce & Morgan will prepare the plans for the new buildings, lately reported, for the Converse College.

Suffolk, Va.—Bank Building.—The Farmers' Bank of Nansemond is reported as to greatly enlarge its building.

Texline, Texas.—Jail. O. T. Toombs will receive bids on and after February 11 for the erection of a jail building for Dallam county, comprising two steel cages, 8x11x11 feet, with all modern improvements.

Troy, Ala.—Gellersted Bros. will erect a three-story business building, as reported lately.

Washington, D. C.—Hotel.—It is stated that the erection of a hotel to cost \$2,000,000 is contemplated. T. E. Roasale is said to be interested in the project.

Washington, D. C.—The chapel of the Church of the Covenant, lately burned, will be rebuilt at once.

Washington, D. C.—Barnes & Weaver will erect 3 two-story dwellings, 17x10 feet, to cost \$7,500; W. F. Hellen, 5 three-story dwellings to cost \$28,000; J. H. Richards, 5 three-story dwellings to cost \$15,000; plans are being prepared by G. S. Cooper for the erection of a three-story dwelling, 20x20 feet, to cost \$3,500; also for 4 three-story dwellings, 16x20 feet, to cost \$12,000; R. E. Crump is preparing plans for 5 two-story dwellings, 16x20 feet, to cost \$15,000.

BURNED.

Camden, Ark.—The electric-light and water-works plant of the Camden Water Works & Electric Light Co.; loss \$20,000.

Dublin, Ga.—The machine shops of W. J. Carter & Co.; estimated loss \$10,000.

Greenville, Texas.—The flour mill of the Hunt County Farmers' Alliance; loss \$30,000.

Grubbs, Ark.—R. P. Watson's cotton gin and mill.

Littleton, N. C.—The cotton gin, etc., of Mrs. E. A. Little, near Littleton.

Montgomery, Texas.—The cotton gin of Gay Bros., near Montgomery.

New Orleans, La.—The barrel factory of Philip Hirsch; loss \$5,000.

New Orleans, La.—The machine shops of the New Orleans & Southern Railroad Co. in St. Bernard Parish.

Windemere, Fla.—The saw mill of A. A. Burrell.

Woodhull, Ga.—The saw mill of Blount & Boynton; loss \$13,500.

Southern Financial News.

NEW BANKS.

Amarillo, Texas.—A. H. Wood will, it is stated, organize the Amarillo National Bank.

Attalla, Ala.—It is stated that another bank will probably be established.

Augusta, Ga.—It is rumored that the Jarvis-Conklin Mortgage Trust Co., of Kansas City, Mo., will establish a bank in Augusta.

Coleman, Texas.—The Coleman National Bank has been organized with Jas. E. McCord, president, and Wm. N. Cameron, cashier. The capital is \$50,000.

Crockett, Texas.—The First National Bank of Crockett, lately reported as applying for charter, has been organized and commenced business with W. E. Mayse, president; J. C. Woote, vice-president, and H. F. Moore, secretary. The capital is \$50,000.

Detroit, Texas.—The First National Bank of Detroit, mentioned last week as authorized to commence business, has been organized with C. H. Miers, president, and D. H. Chambers, cashier. The capital is \$50,000.

Ducktown, Tenn.—A bank may be organized. The Sulphur, Copper & Iron Co. is mentioned in connection with it.

Gordonsville, Va.—It is stated that the reorganization of the Piedmont Bank is probable.

Huntsville, Ala.—The Merchants & Farmers' Bank, recently reported as to be opened by E. H. Andrews and others, has been organized with W. L. Welman, president, and Mr. Andrews, cashier. The capital is \$100,000.

Jefferson, Texas.—A. H. Schlester and associates have applied for authority to organize the Iron City National Bank.

Kenton, Tenn.—A bank has been organized with a capital of \$50,000. The president is Geo. P. Hunt, and the cashier, S. A. Chambers.

Killeen, Texas.—J. D. Slawson may possibly organize the bank recently mentioned.

Lampasas, Texas.—The organization of a new bank is proposed. J. M. Moore, of Velasco, is interested.

Mount Pleasant, Texas.—The Mount Pleasant Bank will, in a few months, change to the national banking system, so it is stated.

Paragould, Ark.—The Greene County Bank has increased its capital to \$30,000.

Pensacola, Fla.—F. C. Brent & Co., bankers, have consolidated with the First National Bank and will continue business under the latter name. The president will be F. C. Brent; the vice-president, W. H. Knowles, and the cashier, J. S. Leonard.

Richmond, Va.—It is proposed to convert the Business Man's Banking Department into a \$500,000 concern to be known as the Broad Street Bank.

Shreveport, La.—John M. Tucker is endeavoring, it is reported, to organize a bank.

Vanceburg, Ky.—The Deposit Bank of Vanceburg, reported last week as having closed its doors, has adjusted the differences mentioned and reorganized, commencing business with Geo. M. Thomas, president, and S. Rugless, cashier.

Whitewright, Texas.—The national bank previously reported has organized with D. M. Ray, president; R. M. Lively, vice-president, and C. B. Bryant, cashier. The capital is \$50,000.

Wilmington, N. C.—J. W. Norwood, of Greenville, S. C., is interested in a project to organize a new bank in Wilmington.

Aransas Pass, Texas.—It is reported that the city has issued \$15,000 of street improvement bonds. Address the mayor for verification of report.

Augusta, Ga.—The organization of a \$500,000 loan and banking company is proposed. Z. Daniel can give information.

Augusta, Ga.—The Augusta Real Estate & Building Association has declared a semi-annual dividend of \$3 per share.

Augusta, Ga.—The Gas Light Co. of Augusta has declared a semi-annual dividend of 3 per cent.

Baltimore, Md.—Owing to a United States law prohibiting the use of the word "national" in any business of a financial character, the American National Loan & Savings Association, reported last week, will amend its charter, changing name to the Assurance Permanent Loan & Savings Association.

Barnesville, Ga.—The New South Savings Bank has declared a dividend of 8 per cent.

Birmingham, Ala.—The West End Land & Improvement Co. will hold a meeting on February 20th for the purpose of authorizing a mortgage upon a part of its property to secure a loan of not more than \$20,000.

Blackville, S. C.—The Merchants & Planters' Bank has declared a dividend of over 20 per cent. on its business for the last two years.

Broadway, Va.—A bill has been introduced in the legislature to authorize the town to borrow \$5,000 and secure same by pledging its revenues. For further information address the town clerk.

This bill has been passed and signed by the governor, thus becoming a law.

Camden, Ark.—The Ouchita Valley Bank has declared a semi-annual dividend of 6 per cent.

Charlottesville, Va.—Efforts are being made to organize a building and loan association. J. C. McKennie & Co. can give information.

Corpus Christi, Texas.—The city will, it is said, issue \$50,000 of water works bonds. For confirmation of this report address the mayor.

Dawson, Ga.—The Dawson National Bank has declared a semi-annual dividend of 5 per cent., and the First State Bank, an annual dividend of 8 per cent.

Denton, Md.—Caroline county will apply to the legislature for authority to issue \$60,000 of railroad bonds. For particulars address the county clerk.

Dinwiddie C. H., Va.—It is stated that Dinwiddie county has authorized the issuance of \$100,000 of bonds for road improvements. Address the county clerk for verification.

Dinwiddie C. H., Va.—A bill authorizing Dinwiddie county to issue bonds to cover its indebtedness has been introduced in the legislature. For information address the county clerk.

Durham, N. C.—The Blackwells-Durham Tobacco Co. has declared a semi-annual dividend of 3 per cent.

Florence, Ala.—The First National Bank has declared a semi-annual dividend of 3 per cent.

Florence, S. C.—The Bank of the Carolinas at a recent meeting resolved to pay a dividend of 8 per cent. upon all original paid up stock; a dividend of 6 per cent. upon all stock paid up during the first quarter of 1891; a dividend of 4 per cent. upon all stock paid up during the second quarter, and a dividend of 2 per cent. upon all stock paid up during the third quarter.

Fort Payne, Ala.—The Fort Payne Machine Works will hold a meeting on February 17 to consider, among other questions, the execution of a mortgage on its property to secure a loan of not more than \$15,000.

Fort Worth, Texas.—Blair & Co., of New York city, have purchased \$170,000 6 per cent. 30-year gold bonds of Fort Worth, as stated in our last issue.

Gainesville, Ga.—The Finger & Shelby Shoe Manufacturing Co. has declared a dividend of 10 per cent.

Glenn Springs, S. C.—The Glenn Springs Railroad Co. offers for sale first mortgage bonds to be issued at the rate of \$16,000 per mile. Address Harvey S. Simpson, president.

Greenville, Ala.—The Greenville Hotel & Improvement Co. will hold a meeting on February 20th for the purpose of borrowing \$10,000 and making a mortgage to secure same, said sum to be borrowed for five years at 8 per cent. interest.

Greenwood, S. C.—The city has voted an issuance of bonds for school purposes. Address the mayor for information.

Hot Springs, Ark.—The Hot Springs Savings, Trust & Guarantee Co. is organizing preparatory to engaging in business. E. F. Klein is president; W. W. Waters, vice president, and C. D. Greaves, secretary; authorized capital stock \$50,000.

Jackson, Tenn.—The Second National Bank declared a net dividend of 10 per cent. last year.

Lynchburg, Va.—The Glamorgan Co. has declared a semi-annual dividend of 5 per cent.

Macon, Ga.—The Macon Savings Bank has declared a semi-annual dividend of 3 1/2 per cent.

Martinsburg, W. Va.—A charter for the Lella Exchange Fire & Marine Insurance Co. has been obtained by William Smith and others, of New York city. The capital stock authorized is \$100,000.

Martinsburg, W. Va.—William Smith and others, of New York, N. Y., have obtained a charter for the German Exchange Fire & Marine Insurance Co. The capital stock authorized is \$100,000.

Mobile, Ala.—The Interstate Abstract Co., lately mentioned as to consider increasing its capital stock, is also considering a still greater increase and an enlargement of its powers and duties.

Moundsville, W. Va.—The Marshall County Bank has declared a semi-annual dividend of 4 per cent.

Murfreesboro, Tenn.—The Stones River National Bank has declared a dividend of 8 per cent., and the First National Bank, a dividend of 12 per cent.

New Orleans, La.—The Rosetta Gravel, Paving & Improvement Co. has declared a dividend of 5 per cent.

New Orleans, La.—The Southern Insurance Co. has declared a semi-annual dividend of 4 per cent.

New Orleans, La.—The Edison Electric Illuminating Co. has declared a quarterly dividend of 2 per cent.

Norfolk, Va.—The Virginia Chemical & Manufacturing Co. has declared a semi-annual dividend of 10 per cent.

Pensacola, Fla.—G. W. Maxwell contemplates, it is said, organizing a loan and trust company.

Prattville, Ala.—The Prattville Cotton Mills, reported in our last issue (under Birmingham) as having declared a semi-annual dividend of 10 per cent., is located at Prattville.

Pulaski City, Va.—The Pulaski Land & Improvement Co. has declared a dividend of 10 per cent. on the capital stock paid in for the period ending October 31st, 1891; office of company's treasurer, 333 Walnut street, Philadelphia, Pa.

Raleigh, N. C.—The North Carolina Railway has declared a semi-annual dividend of 3 per cent.

Richmond, Va.—A bill has passed the legislature to incorporate the Continental Savings & Loan Co. It also has been signed by the governor, thus becoming a law.

Richmond, Va.—The C. F. Sauer Co. has declared a dividend of 8 per cent. for the last five months.

Richmond, Va.—A bill incorporating the Centennial Savings & Loan Co. has been introduced in the legislature.

Roanoke, Va.—The chairman of the finance committee, J. T. Engleby, has sold to a New York party the \$75,000 of city sewer bonds for par and interest.

Rock Hill, S. C.—A. H. White has purchased \$5,000 of city bonds at \$95 per \$100, so it is stated.

Salisbury, N. C.—The Rowan Knitting Mill has declared a dividend of 2 per cent.

Shendun, Va.—The organization of a building and loan association is talked of.

Waile, Texas.—The First National Bank has declared a 10 per cent. dividend.

Westminster, Md.—The city will probably petition the legislature for authority to issue \$10,000 of bonds for street improvements. Address the mayor for further information.

Wheeling, W. Va.—The Union Accident & Benefit Association has declared a dividend of 6 per cent.

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SOUTHERN BANKS.

Below is published a list of Banks and Bankers in the Southern States, whom the MANUFACTURERS' RECORD commends to its readers:

GEORGIA.

AUGUSTA—Georgia Railroad & Banking Co., Chas. H. Phinizy, President. Capital \$4,200,000.

MACON—American National Bank Wm. H. Burden, President. Capital \$250,000.

MACON—Exchange Bank, H. J. Lamar, President; J. W. Cabaniss, Cashier. Capital and surplus \$550,000.

MACON—First National Bank, J. C. Plant, President. Capital and surplus \$260,000.

SOUTH CAROLINA.

COLUMBIA—Carolina National Bank, W. A. Clark, President. Capital \$100,000.

VIRGINIA.

BUENA VISTA—Buena Vista Loan & Trust Co. C. B. Guyer, Pres. Capital \$500,000.

If you are not already a subscriber to the MANUFACTURERS' RECORD, send us \$4 and you will receive it regularly for one year, or six months for \$2.00.

PROPOSALS.

SEALED PROPOSALS will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 18th day of February, 1892, for all the labor and materials required for the approaches to the United States Custom-house, &c., building at Galveston, Texas, in accordance with drawing and specification, copies of which may be had on application at this office or the office of the Custodian at Galveston, Texas. Each bid must be accompanied by a certified check for a sum not less than 3 per cent. of the amount of the proposal. The Department will reject all bids received after the time herein stated for opening the same; also bids which do not comply strictly with all the requirements of this invitation. Proposals must be enclosed in envelopes, sealed and marked "Proposal for Approaches to the United States Custom house, &c., Building at Galveston, Texas," and addressed to W. J. EDBROOKE, Supervising Architect. January 18, 1892.

SEALED PROPOSALS will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 17th day of February, 1892, for furnishing all the labor and materials required to lay complete sewer from the U. S. Courthouse, Postoffice, &c., building at Macon, Ga., to the city sewer, new drain from boiler pit &c., in accordance with the drawings and specification, copies of which may be had on application at this office or the office of the Custodian. Each bid must be accompanied by a certified check for a sum not less than 3 per cent. of the amount of the proposal. The Department will reject all bids received after the time herein stated for opening the same; also bids which do not comply strictly with all the requirements of this invitation. Proposals must be enclosed in envelopes, sealed and marked "Proposal for Sewer, &c., for the United States Courthouse, Postoffice, &c., Building at Macon, Ga.," and addressed to W. J. EDBROOKE, Supervising Architect. January 19, 1892.

SEALED PROPOSALS will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M. on the 18th day of February, 1892, for furnishing all the labor and materials required to lay complete the Sewer from the U. S. Postoffice, Courthouse &c., Building at Baltimore, Md., to Jones's Falls, in accordance with the drawing and specification, copies of which may be had at this office or the office of the Custodian at Baltimore, Md. Each bid must be accompanied by a certified check for a sum not less than 3 per cent. of the amount of the proposal. The Department will reject all bids received after the time herein stated for opening the same; also bids which do not comply strictly with all the requirements of this invitation. Proposals must be enclosed in envelopes, sealed and marked "Proposal for Sewer from the U. S. Postoffice, Courthouse, &c., Building at Baltimore, Md.," and addressed to W. J. EDBROOKE, Supervising Architect. January 15, 1892.

SEALED PROPOSALS will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M. on the 18th day of February, 1892, for all the labor and materials required for the approaches to the U. S. Courthouse, Postoffice, &c., Building at Denver, Colorado, in accordance with drawings and specification, copies of which may be had at this office or the office of the Superintendent at Denver, Colorado. Each bid must be accompanied by a certified check for a sum not less than 3 per cent. of the amount of the proposal. The Department will reject all bids received after the time herein stated for opening the same; also bids which do not comply strictly with all the requirements of this invitation. Proposals must be enclosed in envelopes, sealed and marked "Proposal for Approaches to the U. S. Courthouse, Postoffice, &c., at Denver, Colorado," and addressed to W. J. EDBROOKE, Supervising Architect. January 15, 1892.

COMMISSIONERS' SALE OF THE TERMINAL HOTEL, WEST POINT, VA., SATURDAY, FEBRUARY 13, 1892, At 12 o'clock M.

By virtue of a decree of the Circuit Court of King William County, entered on the 21st day of November, 1891, in the chancery causes of Diggs, et al., vs. Henley and Henley, vs. Atkinson, trustee, we will sell at auction to the highest bidder, upon the premises, on

SATURDAY, FEBRUARY 13, 1892, commencing at 12 o'clock M., that VALUABLE HOTEL property described in the deed of trust from Henley to Atkinson, trustee, as all that certain tract or parcel of land lying and being in the town of West Point, King William County, Va., upon which stands the Terminal Hotel and its appurtenances, being as much of the Beach lot as lies between D and E streets as they would be projected if they ran down to the water. Also all the FURNITURE in said hotel. This is a large FOUR-STORY HOTEL, located in a beautiful portion of the healthy and growing town of West Point, and is well patronized as a Summer Resort.

TERMS—Cash enough to pay expenses of sale and to discharge the several notes now due with interest until paid, as follows: \$630 due September 1, 1890; \$3,666.66, \$3,333.34 and \$630, due March 1, 1890; \$420, due September 1, 1890; \$3,333.33, \$3,666.66 and \$420, due March 1, 1891, and \$10, due September 1, 1891, and upon the following credits: \$3,333.33, \$3,666.66 and \$220 until March 1, 1892, and the balance, if any, as may be announced at time of sale.

ISAAC DIGGS,
H. T. LEWIS,
H. R. POLLARD,
Commissioners.

Diggs and als., against Henley and Henley, against Atkinson, trustee, and als.—In the Clerk's office of the Circuit Court of King William County;

I, Burnley Taylor, deputy clerk of the said court, do certify that the bond required of the special commissioners by the decree rendered in said cause on the 21st day of November, 1891, has been duly given.

Given under my hand as clerk of the said court this 25th day of December, 1891.
BURNLEY TAYLOR
Deputy Clerk.

WANTS.

WANTED To correspond with a PRACTICAL COTTON MILL MAN who can furnish a few thousand dollars along with service as SUPERINTENDENT of a small plant yet to be built. Address G. R. CRANE, Tallahassee, Tenn.

WANTED—POSITION as SUPERINTENDENT OF MACHINERY by a thoroughly competent Hydraulic and Mechanical Engineer. Ten years' experience building and operating Hydraulic Compresses, Steam Engines and Locomotives. Can handle men to best advantage. Best of references. O. J. MORRIS, Opelika, Ala.

\$50,000 WANTED.

Secured by first mortgage on 4,000 acres iron ore lands in Camp and Upshur Counties, Texas at 8 per cent. interest on 20 years' time. To be used in developing said property. Address BESSEMER IRON MINING & MANUFACTURING COMPANY, Pittsburg, Texas.

WANTED—A PRACTICAL TANNER.

with Capital, to engage in the Manufacture of Leather in conjunction with a good company already formed. We have the cheapest hides and oak bark, with water from a peculiar well, that beats the world. Our samples so far shown are pronounced by experts as the very best. The opening is good and worthy of the attention of parties desirous of embarking in the enterprise. Address JOSEPH LABADIE, Manfrs. Com.; Chamber of Commerce, Galveston, Texas.

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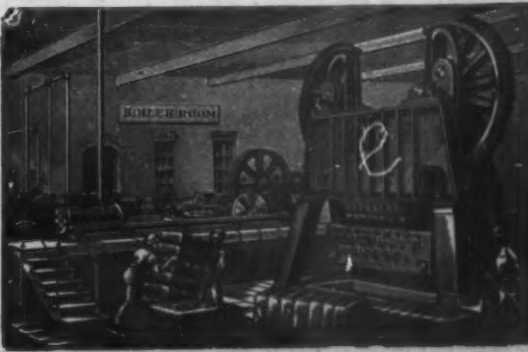
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§ In correspondence relating to matters reported in this paper, it will be a favor if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ALABAMA.

Anniston—Cotton Mill.—William Zinn, of Boston, Mass., lately mentioned as probably to erect a 15,000 spindle cotton mill in Anniston, has, with J. B. Goodwin, A. L. Tyler, Sr., and others, succeeded in raising the necessary bonus, and the mill will, it is said, now be erected.

Anniston—Iron Foundry and Machine Shop.—J. & D. Noble have purchased and will put in operation the Murray & Stevenson foundry and machine shop.

Birmingham—Pump Works.—W. D. Snow has perfected arrangements for the manufacture of his wood force pumps.*

Birmingham—Cotton Mill. It is proposed to organize a \$400,000 stock company to erect a cotton mill, and subscriptions are now being taken. For information address Frank P. O'Brien.

Birmingham—Umbrella, etc., Factory.—The Birmingham Umbrella & Parasol Manufacturing Co. has established a factory for the manufacture of umbrellas, parasols, etc.

Blockton—Harness Factory.—John Martz is reported as to start a harness factory.

Bridgeport—Lumber Mill.—The Bridgeport Lumber Co. has decided to increase its capital stock from \$100,000 to \$150,000, as recently stated.

Bridgeport—Stone Quarry.—The Bridgeport Stone Co. has leased a stone quarry at Bridgeport and will develop same.

Bridgeport—Canning Factory.—The Chattanooga Canning Co., of Chattanooga, Tenn., has, it is stated, signed contract for the removal of its canning factory to Bridgeport.

Bridgeport—Iron Foundry, etc.—J. H. Cole, of Parkersburg, W. Va., is investigating with a view of removing his iron foundry, machine shop and boiler works to Bridgeport.

Bridgeport—Sash, Door, etc., Factory.—It is rumored that the Willingham Door & Sash Co., of Chattanooga, Tenn., will remove its sash, door and blind factory, etc., to Bridgeport.

Carbon Hill—Coal Mine.—E. Bynon has organized a company to open a coal mine.*

Fort Payne—Gin Factory.—The Southern Cotton Gin Co. has been organized with W. H. Frear, of Washington, D. C., president; S. H. Congdon, vice-president, and G. E. Russell, of Holyoke, Mass., secretary, to manufacture cotton gins according to the Brott patent.

Garland—Brick Works.—Mr. Robinson is reported as erecting brick works.

Gurley—Stave Mill.—A. Walton & Son will put in a portable stave mill.*

Mobile—Sash, Door and Blind Factory.—The Alabama Sash, Door & Blind Factory has recently been overhauled and repaired and put in operation.

Montgomery—Canning Factory.—E. Napier contemplates establishing a tomato canning factory.*

New Decatur—Barrel Factory.—The American Oak Extract Co. expects to erect a barrel factory in the spring.

Spring Garden—Water Works.—The Spring Garden Water Works, Land & Improvement Co. will put in new boiler and pumps.*

Spring Garden—Corn Mill.—G. W. Rutherford will put in a corn mill.

Sylacauga—Land, Cotton Mill, etc.—A syndicate of Pittsburg (Pa.) capitalists has purchased the property of the Marble City Land & Furnace Co., consisting of the town and mineral and timber lands. This syndicate has reorganized the company as the Sylacauga Land Co. with W. W. Atcheson, of Pittsburg, Pa., as president; S. E. Noble, of Anniston, vice-president, and J. E. Keith, of Anniston, secretary.

Sylacauga—Cotton Mill.—The Penn Cotton Mill Co. has been organized with W. A. Vogleson, of Pittsburg, Pa., as president; J. W. Drape, also of Pittsburg, vice-president, and J. E. Keith, of Anniston, secretary. This company will remove the Penn Cotton Mill, of Alleghany, Pa., to Sylacauga, where it will rebuild and operate it. The capital stock is \$300,000.

Trussville—Rock Quarry.—The Trussville Furnace & Mining Co. will probably open a rock quarry to supply its furnace.

White Plains—Bridge.—J. T. De Arman will receive sealed proposals at Jacksonville until February 8 for the construction of an iron or wood highway bridge near White Plains. Plans and specifications can be seen at the office of Patterson & Robertson, at Anniston.

ARKANSAS.

Benton—Lumber Mill.—The Little Rock Lumber Co. has been incorporated with M. T. Greene, of Council Bluffs, Iowa, as president; S. P. McConnell as vice-president, and W. A. Bailey as secretary. The capital stock is \$35,000. Mills will be located at Hafer's Swift h, in Saline county; office of company, Little Rock.

Camden—Electric-light Plant and Water Works.—The Camden Water Works & Electric Light Co. will, it is stated, rebuild its electric-light and water works plant, reported in this issue as burned.

Conway—Flour Mill.—A number of the citizens of Faulkner county have, it is stated, organized a company to erect and operate a flour mill at or near Conway.

Fayetteville—Electric-light plant.—The Fayetteville Electric Light & Power Co. has, it is stated, put new machinery in its electric-light plant.

Helena—Lumber Mill.—The S. H. Vealie Lumber Co. has been incorporated with S. H. Vealie, Jr., as president. The capital stock is \$12,000.

Hot Springs—Gold Mine.—Barnhart & Majors have leased and will develop the Lost Louisiana gold mine, as reported recently; the machinery necessary for development is now being placed.

Jonesboro—Electric-light Plant.—An Eastern capitalist is said to have made the citizens a proposition for the erection of an electric-light plant.

Little Rock—Candy Factory.—Mr. Karcher is reported as having purchased the interest of Mr. Raible in the Little Rock Candy Factory and as to operate same, increasing its facilities.

Little Rock—Improvement Company.—The Eureka Improvement Co. has increased its capital stock \$13,000.

Little Rock—Publishing.—R. P. Horrocks, G. R. Brown and others have incorporated the Gist Publishing Co., with a capital stock of \$5,000.

Magnolia—Lumber Company.—The Lumberman's Supply Co. has been organized with L. C. Van Deizer, president; C. E. Lelendecker, vice-president, and Frank Dillman, secretary. The capital stock is \$10,000.

Magnolia—Lumber Mill.—The Big Seven Lumber Co. has been incorporated with L. C. Van Deizer, president; Frank Dillman, vice president, and Charles Halen, secretary. The capital stock is \$20,000.

Magnolia—Manufacturing Machinery, Wagons, etc.—The Magnolia Manufacturing Co. has been incorporated to manufacture and deal in machinery, iron, coal, wagons, etc. The capital stock is \$5,000.

Washington—Oil Wells.—A stock company is being organized to sink oil wells on the property of W. N. Johnson near Washington.

FLORIDA.

Auburndale—Canal.—C. S. Page, H. D. Johnson and H. Hammond have incorporated the Tropical Development & Navigation Co. to construct and operate a canal among the lakes north of the South Florida Railroad. This company has also purchased the interests, etc., of the Polk County Canal & Navigation Co. The capital stock is \$50,000.

Homeland—Phosphate Plant.—C. L. Wilson may erect a plant for grinding phosphate rock.*

Jacksonville—Hardware Company.—M. R. Bacon, T. J. and J. I. Adams and C. E. Hyde have incorporated the Adams Hardware Co. with a capital stock of \$50,000.

New Smyrna—Land Company.—Cheston Simmons, C. E. Silkwood, A. V. Huyler and others have incorporated the New Smyrna Land & Improvement Co. with a capital stock of \$60,000.

St. Petersburg—Ice Factory, etc.—The Tampa Bay Ice Co. has been incorporated with G. W. Codington, president; W. Y. Hildrun, vice-president, and C. R. Switzer, secretary, to operate the Tampa Bay Ice Factory. This company is also privileged to erect an electric-light plant, construct water works, etc. The capital stock is \$30,000.

Tampa—Canning Factory.—M. Sotolongo, of Key West, is reported as to start a factory in Tampa for canning and preserving all kinds of fruits.

Tampa—Cigar Factory.—A. Correa, of Ybor City, will start a cigar factory, it is said, in Tampa.

Tampa—Electric-light Plant.—J. H. Ahern is reported as having purchased a controlling interest in the Florida Electric Co.'s electric-light plant, and as to improve, increase capacity of and operate same.

White Springs—Saw and Planing Mill.—H. F. Armington is rebuilding his saw and planing mill recently burned.

GEORGIA.

Americus—Refrigerator.—The Armour Packing Co., of Kansas City, Mo., states that it

has been investigating concerning building a refrigerator at Americus, and may possibly do so in the summer.

Athens—Publishing.—A \$10,000 stock company is reported as to be organized for the purchase and publication of the Evening Ledger.

Atlanta—Ice Factory.—J. C. Peck & Son are reported as having put in a 2 ton ice machine.

Atlanta—Sewer Construction.—Ordinances have been introduced in the city council to construct three sewers at an estimated cost of \$18,000, \$32,000 and \$10,000, respectively. For particulars address A. P. Woodward, clerk.

Atlanta—Water Works.—The Atlanta Machine Works have received contract at \$11,777 for the 15 boilers, and S. B. Mosby & Co., of Bedford City, Va., contract at \$52,347.60 for the construction of the reservoir, for the new water works.

Augusta—Drug Company.—The Howard Willett Drug Co., reported last week as incorporated, will only deal in drugs and will not manufacture.

Augusta—Glass Factory.—The Augusta Glass Works will, as stated last week, increase its capital stock \$25,000. It has completed its flat furnace, and will soon put it in operation.

Box Spring—Grist Mill and Gin.—C. M. Smith has recently erected a cotton gin and grist mill.

Brunswick—Lumber Mill.—J. S. Cummings and others, of Muskegon, Mich., are investigating as to the advisability of establishing a lumber mill in Brunswick.

Creighton—Gold Mine.—H. T. Fisher is developing gold mine, as lately reported; has put in stamp mill, and will put in chlorination works and pump.

Eatonton—Land Improvement.—The Middle Georgia Land Co., reported in our last issue as being organized, has been incorporated by J. T. Dennis and others for the purchase, improvement, etc., of land.

Emerson—Land Improvement, etc.—C. M. Jones, J. T. Norris, A. J. McBride and J. P. Stegall have incorporated the Emerson Land & Manufacturing Co. for the improvement of real estate, development of all kinds of mineral land, etc., and is also privileged to construct water works, erect gas plant, etc. The capital stock is \$50,000.

Greenville—Planing Mill.—L. J. Hurd contemplates erecting a planing mill.

Griffin—Hedge-fence Company.—The Griffin Hedge Co. has completed its organization with H. W. Hasselkus, president; R. F. Strickland, vice-president, and J. C. Brooks secretary.

Johnston Station—Brick Works.—N. McQueen, lately referred to, contemplates organizing a stock company to erect brick works.

Macon—Sewer Work.—W. J. Edbrooke, supervising architect, Washington, D. C., will receive sealed proposals until February 17 for furnishing all the labor and materials required to lay complete the sewer from the United States courthouse building at Macon to the city sewer. Drawings and specifications may be had on application.

Rome—Furnaces, Rolling Mill, Mineral Properties, etc.—A syndicate of English capitalists is negotiating for the purchase at \$1,750,000 of the iron furnaces, rolling mill, mineral and other properties of the New Rome Land Co. If the purchase is completed the English capitalists propose extensive developments.

Savannah—Ice Factory.—The Knickerbocker Ice Co.'s factory is nearing completion, and will shortly be put in operation.

Savannah—Oyster Cultivation.—F. S. Lathrop is president; Lester Hubbell, vice-president, and J. G. Bullock, secretary, of the Vernon Oyster Co., reported in our last issue as organized for the cultivation of oysters.

Waresborough—Saw Mill.—Mr. Maughan is reported as to erect a saw mill.

Waresborough—Turpentine Distillery.—Peele, Floyd & Co. are reported as erecting a turpentine distillery.

KENTUCKY.

Bardstown—Distillery.—T. S. Moore has, it is stated, increased the capacity of his distillery from 75 to 108 bushels.

Cloverport—Planing Mill, etc.—S. I. Lewis and F. H. and A. L. Ballman have incorporated the Third Street Planing Mill to manufacture all kinds of building material, operate planing mill, etc. The authorized capital stock is \$10,000.

Covington—Cement and Plaster Works.—G. W. Drach, Charles Phares and Guy Webber have incorporated the Mineral Plaster Co. to manufacture plastering materials, cements, etc. The capital stock is \$10,000.

Danville—Carriage-button Factory.—The Central Kentucky Carriage Co. is reported as having increased its capital stock and as to increase the capacity of its carriage-button factory.

Henderson—Water Works.—The city will erect a new reservoir. R. C. Blackwell can give information.

Lexington—Lock Factory.—The Fayette Vault & Trust Co. has purchased the Lexington Lock Factory for \$10,000.

Lexington—Tobacco Factory.—Sayre & Murphy have started a smoking-tobacco factory.

Louisville—Paint, etc., Factory.—The Collins-Beach Varnish Co. has been incorporated with Lewis Collins, president; C. F. Beach, Jr., vice-president, and James G. Guthrie, treasurer, for the manufacture of paints, varnishes, etc. The authorized capital stock is \$100,000. Will start works March 1st.*

Maysville—Tobacco Factory.—J. H. Rains & Sons will double the capacity of their tobacco factory, as reported last week.

Maysville—Buggy and Carriage Factory.—Edward Myall, J. J. Shackelford and Philip S. Kemper have incorporated the Maysville Carriage Co. for the purpose of enlarging, increasing the capacity of and operating the carriage and buggy factory of Myall & Shackelford. The capital stock is to be not less than \$20,000.

Middlesborough—Saw Mill.—The Cumberland Lumber Co. contemplates the erection of a large band saw mill on Powell's river in the near future.

Newport—Watch-case Factory.—The Wadsworth Watch Case Co., reported lately as incorporated, succeeds the firm of H. A. Wadsworth & Co., watch-case manufacturers. J. H. Stegman is president; H. Remke, vice-president, and H. A. Wadsworth, treasurer and general manager.

Russell—Brick Works.—The erection of fire-brick works is talked of.

Springville—Paint Mill.—M. H. Miller and others have, as reported last week, let contract for the erection of a paint mill, and for its operation will incorporate the Eureka Paint Mills. A. Titus and A. M. Damron, of Portsmouth, Ohio, and others are to be the incorporators; machinery has been purchased.

LOUISIANA.

Alexandria—Saw and Planing Mill.—The Rapides Lumber Co. is reported as to erect at once a saw and planing mill with a capacity of 75,000 feet of lumber per day. The company's president is C. S. Woodworth, of Dallas, Texas, and its secretary, C. E. Roberts.

Alexandria—Saw Mill.—The New York Lumber Co., Thomas and John F. Quinn, of Saginaw, Mich., representatives, is reported as to put its Alexandria (La.) saw mill in operation.

New Iberia—Shingle Mill.—Gebert Bros. will erect a shingle mill, as reported last week; will have a daily capacity of from 150,000 to 200,000.*

New Orleans—Saw Mills, etc.—The Carboneum Wood Preserving & Manufacturing Co. has been incorporated to treat lumber with carbolineum avenerius wood preserving oil, to erect saw mills, sash, door, blind factory, etc. Joseph B. Gribble is president of the company, and the capital stock is \$50,000.

New Orleans—Furniture Factory, etc.—The Kern's Manufacturing Co. has been incorporated to manufacture wood furniture, etc. The capital stock is \$60,000.

New Orleans—Mineral Water, etc., Factory.—The Crescent City Seltz & Mineral Water Co. has been incorporated by P. J. Gillian (president), V. Ranna, A. A. Ker and others to purchase and continue the business of the Crescent City Seltz & Mineral Water Manufacturing Co. The capital stock is to be not less than \$15,000 nor more than \$50,000.

New Orleans—Saw Mill.—W. E. Cole has purchased and will operate the New York Hardwood Lumber Co.'s saw-mill boat; it has a daily capacity of 30,000 feet.

MARYLAND.

Baltimore—Express Company.—W. H. Trego, Howard Munnikhuyzen, N. P. Bond and others have incorporated the People's Dispatch Co. to succeed and extend the operations of the People's Dispatch & Transfer Co. The capital stock is \$500,000.

Baltimore—Iron and Steel Castings Works.—The Malleable Iron & Steel Casting Co. has been organized with P. Kennedy as president and Thomas Flynn, vice-president and secretary, to make iron and steel castings. Site has been purchased and two buildings will be erected, one 50x100 feet, for the foundry, containing the cupola and furnace and 50 iron benches for molders; the other for the pattern and engine-room, etc. Also to be erected is a number of annealing furnaces.

Baltimore—Real Estate.—John F. Prechtel, L. Borst, L. Hoffman and others have incorporated the Vorwärts Hallenbau Gesellschaft for the purpose of dealing in real estate. The capital stock is \$10,000.

Baltimore—Ice Factory.—August Fenneman, J. H. Shabb, R. B. Tippet and others have incorporated the Independent Ice & Coal Co. with a capital stock of \$20,000. Their plant is already equipped with machinery.

Baltimore-Sewer Works.—W. J. Edbrooke, supervising architect, Washington, D. C., will receive sealed proposals until February 17th for furnishing all the labor and materials required to lay complete the sewer from the U. S. postoffice building at Baltimore to Jones' Falls, in accordance with drawings and specifications, copies of which may be had on application.

Cumberland-Electric-light Plant.—The Edison Electric Illuminating Co. has, it is stated, put new machinery in its electric-light plant.

Easton-Furniture Factory.—Jacob Christ, of Bridgeport, Conn., is reported as to remove his furniture factory to Easton.

Funkstown-Flour Mill.—William F. Towson & Co. have, it is stated, leased the flour mill of J. W. Stonebraker & Co., and will operate same.

Hoffmanville-Paper Mill.—W. H. Hoffman & Sons have acquired and will operate the Rockdale Paper Mill.

Hagerstown-Lumber Mill.—The Danzer Lumber Co. is reported as to put new machinery in its lumber mill.

Hagerstown-Shirt Factory.—C. R. Howell has, it is stated, started the manufacture of flannel shirts.

Lonaconing-Cigar Factory.—A Rothville (Pa.) party is corresponding relative to the establishment of a cigar factory in Lonaconing.

Manchester-Cigar Factory.—As reported last week, C. J. Ganter will establish a cigar factory.

Rayville-Saw Mill.—George W. Hcshall is making arrangements for the establishment of a saw mill at Spook Hill.

Washington, D. C.—Cement, etc. Company.—The Columbia Cement & Building Material Co., lately reported as incorporated, will endeavor to advance the sale of the Acme cement, etc. F. S. Culver, 719 13th street N. W., is secretary, and can be addressed for further information.

Washington, D. C.—Plow Works.—The National Hancock Rotary Plow Co., lately reported as incorporated, has for its president, H. L. Blacoe; for vice-president, M. T. Hancock, and for secretary, G. M. Carlisle. Machinery has been purchased and plant is now in operation.

MISSISSIPPI

Ferry-Mercantile Company.—The Davis Ellis Co. has been incorporated to conduct a mercantile business.

NORTH CAROLINA

Aberdeen-Cotton Mill.—The erection of a cotton mill is talked of.

Charlotte-Paper Mill.—R. M. Oats is reported as having purchased the Lincoln paper mills for \$11,000, and as to organize a stock company for the improvement and operation of same.

Monroe-Cotton Mill and Electric-light Plant.—The Monroe Cotton Mills will put in an electric-light plant, as stated last week; also it contemplates duplicating its machinery soon.

Mount Airy-Tobacco Factory.—Sparger Bros. are erecting a five-story plug-tobacco factory building, as reported in our last issue.

Elizabeth City-Electric-light Plant.—A \$10,000 stock company has been organized to erect an electric-light plant. George M. Scott can be addressed for information.

Georgeville-Silver Mine.—The Oliver Oil Co., of Charlotte, is reported as to develop the Silver Valley mine near Georgeville.

Gulford College-Saw and Grist Mill.—Robert Gorrell is reported as to erect a saw and grist mill near Guilford College.

King's Mountain-Cotton Mill.—The company recently reported as being organized to erect a cotton mill has held a stockholders' meeting and elected W. O. Ware as president and C. E. Falls as secretary.

Morganton-Harness and Saddle Factory.—J. A. Shuping will engage in the manufacture of harness and saddles about April 1st.

Morganton-Publishing, etc.—W. C. Ervin, T. G. Cobb, I. T. Avery and others have incorporated the Herald Publishing Co. for the purpose of publishing newspapers, magazines, etc. The capital stock is \$50,000.

Raleigh-Ice Factory.—H. Bayer & Son, of Charleston, S. C., have, as reported last week, purchased the Piate Ice factory; will improve and operate it.

Raleigh-Water Works.—The Raleigh Water Co. will put in new filters and otherwise improve its water works.

Ramseur-Saw and Planing Mill.—Burgess, Lineberry & Co. have recently started saw and planing mill.

Salisbury-Knitting Mill.—The Rowan Knitting Co. will, it is stated, put new machinery in to increase the capacity of its knitting mill.

Sanford-Shuttle-block Factory.—D. A. Weedon has, it is stated, started a shuttle-block factory.

Sanford-Sash and Blind Factory.—The Sanford Sash & Blind Co. is increasing its factory's capacity and putting in a new dryer.

Taylorville-Tobacco Factory.—The organization of the stock company to erect a tobacco factory, mentioned last week, is very probable. For further particulars address E. C. Sloan.

SOUTH CAROLINA

Aiken-Corn and Flour Mill.—J. V. George is erecting building for his corn and flour mill.

Branchville-Casket and Furniture Factory.—The \$30,000 stock company, lately reported as to be organized for the establishment of a casket and furniture factory, has been incorporated by J. R. Ennis, A. T. Paete, B. H. Moss and others as the Branchville Furniture & Casket Co.

Effingham-Canning Factory.—R. H. Bigham of Florence county, proposes the establishment of a canning factory at Effingham.

Graham-Machine Shops.—The South Bound Railroad Co. (office, Savannah, Ga.) has, it is stated, decided to erect machine shops at Graham.

Greenville-Lathe, etc., Machinery.—New machinery, including scratching and polishing lathes, etc., has been put in at the Southern School of Horology.

Greenwood-Electric-light Plant.—An electric light company is endeavoring to secure from the city council a franchise for the erection of a \$10,000 electric light plant. The mayor can give information.

Hamburgh-Fence Company.—W. T. Gary, of Augusta; B. F. Perry, of Greenville; J. T. Gaston and others have incorporated the South Carolina Hedge & Wire Fence Co. with a capital stock of \$100,000.

Jonesville-Cotton Mill.—The MANUFACTURERS' RECORD is informed that in the event of the construction of the Jonesville & Lockhart Shoals Railroad, reported in the Railroad Department in this issue, capitalists are prepared to at once erect a 25,000 spindle cotton mill.

TENNESSEE

Chattanooga-Planing Mill, etc.—The Loomis & Hart Manufacturing Co. has purchased the property, consisting of a planing mill, lumber yard, etc., of W. R. Stivers & Co. for the sum of \$9,050, and will operate same.

Chattanooga-Manufacturing.—The National Manufacturing Co. has been incorporated.

Chattanooga-Land Improvement.—J. L. Adams, of Jamestown, Ohio; E. G. Richmond, W. D. Billmeyer and others have incorporated the Ridgewood Land Co. This company owns 600 acres of land near Walden's Ridge, and will improve same by the building of a suburb.

Chattanooga-Rubber Factory.—The Southern Rubber Manufacturing Co., reported recently, will receive bids until February 15 for all the labor and materials required in the erection of the buildings for its factory at East End. Plans and specifications can be seen at the office of C. T. Tipton, 819 Georgia avenue.

Chattanooga-Stove Works.—C. C. Howard, J. H. Burnet, W. L. Shirley and others have incorporated the C. C. Howard Stove Co. to erect a plant for the manufacture of stoves.

East Chattanooga-Brick Works.—The East Chattanooga Land Co. will likely start brick works.

Greenville-Machine Shops.—Machine shops will probably be established.

Harriman-Radiator Factory.—Negotiations are in progress with the Holland Radiator Manufacturing Co., of Chicago, Ill., looking to the establishment in Harriman of a plant for the manufacture of steam and hot-water radiators, etc.

Jasper-Manufacturing.—The Bain Manufacturing Co., of Marion county, has been incorporated.

Kingston-Lumber Mill.—A Baltimore (Md.) lumber company is reported as having plans prepared for a lumber mill to be erected at Kingston.

Knoxville-Tannic-acid Factory.—George O'Berne & Co., of Chicago, Ill., previously referred to, have completed arrangements for locating a tannic-acid factory in Knoxville. The plant will cost, it is stated, about \$55,000, and be in operation by April 1st.

Memphis-Shoe Company.—The Voegli Shoe Co. has been incorporated.

Mossy Creek-Electric-light Plant.—Plans are reported as being prepared for an electric-light plant to be operated in connection with the water works.

Nashville-Coal Mines.—The Tennessee Coal, Iron & Railroad Co. has about concluded negotiations with J. W. Renfro, of Atlanta, Ga., for 3,000 acres of coal land, including the Oliver Spring mine near Nashville.

Newport-Chair Factory.—A chair factory may be erected. A. H. Ordway can give information.

Sequachee-Grist and Planing Mill.—B. W. Rogers will erect a grist mill and a planing mill at Sequachee.

South Pittsburgh-Coal, Iron and Timber Lands.—Ohio parties are reported as having purchased 40,000 acres of coal, iron and timber land on the Cumberland mountain near South Pittsburgh for \$300,000, and as to develop same.

Tallahoma-Flour Mill.—Thomas A. Gunn contemplates the erection of the flour mill lately mentioned.

TEXAS

Alvarado-Cottonseed-oil Mill.—It is reported that a cottonseed-oil mill will be erected.

Corsicana-Broom Factory.—St. Louis (Mo.) parties have, it is reported, completed arrange-

ments for the establishment of a broom factory in Corsicana.

Dallas-School furnishings Factory.—The Benbrook School Furnishings Co., reported lately as incorporated, states that it will probably establish a factory by next year.

Denton-Electric-light Plant and Water Works.—The city may soon contract for the establishment of an electric-light plant and water works. For information address the mayor.

Dodd-Corn and Feed Mill.—H. C. Hunter will put in a corn and feed mill.

Fort Worth-Elevator and Maltary.—Frederick Krauss, of Milwaukee, Wis., recently reported as to erect a maltary in Fort Worth, will have associated with him Mr. Gruenther, also of Milwaukee. Site has been selected, and it is proposed to erect a Galland-Henning pneumatic-drum-system malting plant with a capacity of 200,000 bushels yearly; a 100,000-bushel elevator will also be erected.

Fort Worth-Ice Factory.—The Texas Brewing Co. has let contract, it is stated, for the erection of a \$150,000 ice plant, to be operated in connection with its brewery.

Fort Worth-Refrigerator.—The Anheuser-Busch Brewing Association, of St. Louis, Mo., will erect, it is reported, a refrigerating plant in Fort Worth.

Gainesville-Cottonseed-oil Mill.—A 50-ton cottonseed-oil mill is now under construction. For information address F. K. Sherwood, secretary.

Hammond-Grist Mill and Gin.—E. H. Bates will rebuild his grist mill and cotton gin burned recently.

Hartley-Water Works.—A water-works system is now being put in. For information address Benjamin Lawson, county clerk.

Houston-Tannery.—R. W. Turner, of Dublin, is in correspondence with the Board of Trade relative to the establishment of a tannery in Houston.

Houston-Implement Factory.—The National Implement Co., of Polo, Ill., has made a proposition to the secretary of the Board of Trade for the removal of its implement factory to Houston.

Jefferson-Velocipede, etc. Company.—B. F. Sherrel, E. C. Epperson and others have incorporated the Lascato Patent Handcar & Velocipede Co. with a capital stock of \$30,000.

Llano-Brick Works.—J. W. Hunter (present address, Dodd) will establish brick works at Llano.

Matagorda-Cotton Gin.—V. L. & V. D. Le Tulle will rebuild their cotton gin lately burned.

Velasco-Pickle Factory.—Tennessee parties are in correspondence with Wall & Norfleet relative to the establishment of a \$25,000 pickle factory in Velasco.

Velasco-Ice Factory.—The Crystallized Ice Co., of Parsons, Kans., will erect an ice factory in Velasco, so it is stated.

Velasco-Iron Foundry and Machine Shop.—Gainesville parties will probably establish an iron foundry and machine shop in Velasco. Wall & Norfleet can give information.

VIRGINIA

Alexandria-Gas Range Company.—The De Preux's Economizing Gas Range Co. has been incorporated.

Alexandria-Novelty Works.—The Potomac Novelty Co. is preparing to put in operation its patented novelty factory.

Clifton Forge-Woolen Mill.—E. M. Nettleton has purchased and will operate the Clifton Forge Woolen Mill.

Clifton Forge-Ice Factory.—F. M. Jones is organizing a stock company to erect an ice factory, as reported last week.

Covington-Sewerage and Street Improvements.—The bill authorizing the issuance of \$10,000 of bonds for sewerage and street improvements, referred to lately, has been presented to the legislature. For further information address J. K. Campbell, mayor.

Cripple Creek-Iron Mines.—The Consolidated Mining Co. (C. M. Clark, of Philadelphia, Pa. president) has purchased the iron ore on the Stephen Porter property on Cripple creek, and will later on develop it.

Duffield-Corn Mill.—Elihu Adams will start a corn mill.

Hale's Mill-Flour Mill.—D. F. Hale has, as stated lately, rebuilt his flour mill.

Newport News-Land Improvement.—The North Carolina & Newport News Co., recently reported (under Durham, N. C.) as incorporated, has purchased and will improve 175 building lots at Newport News. B. L. Duke, of Durham, N. C., is president; L. D. Heath, also of Durham, vice-president, and I. S. Lipscomb, of Ashland, Va., general manager.

Norfolk-Brick Works.—The Old Dominion Brick, Tile & Manufacturing Co. will put in new machinery to increase the capacity of its brick works to 50,000 daily.

Orkney Springs-Improvement.—The Orkney Springs Hotel & Improvement Co. has been incorporated with A. J. Milliken, of Keysville, as president.

Richlands-Publishing.—The Richlands Publishing Co. has been organized with C. Graham as president; M. P. Cayley, of Stamford, England, vice-president, and Edwin Edlison, secretary.

Richmond-Meat-juce Works.—The Valentine Meat Juice Works will build a boiler-house addition.

Richmond-Mining.—A bill has been introduced in the legislature to incorporate the Rich Valley Gypsum & Mineral Co.

Richmond-Mining, Manufacturing, etc.—A bill has been introduced in the legislature to incorporate the Eldorado Mining, Manufacturing & Improvement Co.

Richmond-Land Development, etc.—A bill has passed the legislature incorporating the Virginia Land, Development & Transportation Co.

Richmond-Merchandise Company.—The William E. West and Benjamin T. Crump Co. has been incorporated with W. E. West, president, and B. T. Crump, secretary, to carry on a general merchandise business in woodenware, brooms, etc. The capital stock is to be not less than \$30,000 nor more than \$100,000.

Richmond-Light and Power Company.—A bill has been introduced in the legislature to incorporate the Chesapeake Light & Power Co.

Richmond-Iron, Coal, etc., Mines.—A bill has been introduced in the legislature to incorporate the Walker's Mountain Iron, Coal & Timber Co.

Virginia-Iron Mines, Furnaces, etc.—The stock company referred to in our last issue (under Covington) as organized with W. T. Thayer, of Charleston, W. Va., as president, is known as the Potts Valley Mining & Manufacturing Co. Mr. Thayer states in a letter to the MANUFACTURERS' RECORD that the company has purchased 70,000 acres of iron and timber lands on Potts creek, and will develop same in the spring; also mine and ship on a large scale and build iron furnaces.

Warsaw-Canning Factory.—Efforts are being made for the organization of a stock company to erect a canning factory. J. D. Garland can give information.

West Point-Woodworking Factory.—Delaware parties will, as reported in our last issue, establish a woodworking factory in West Point.

WEST VIRGINIA

Albright-Drug, Medicine, etc., Factory.—D. S. Trowbridge and others, of Stamford, Conn.; George W. L. Marsden and others have incorporated the Zuni Chemical & Publishing Co. to manufacture drugs, chemicals, etc. The capital stock is \$1,000,000, with privilege of increasing to \$2,000,000.

Buckhannon-Furniture Factory.—Endeavors are now being made to organize the stock company to erect furniture factory reported last week. For further information address the Buckhannon Land Trust Association.

Central City-Powder Mill.—The Phoenix Powder Manufacturing Co. (office, 310 Broadway, New York) will rebuild its powder mill near Central City recently destroyed by an explosion.

Fairmont-Coal Mines and Coke Ovens.—John A. Clark and others have incorporated the Clark Coal & Coke Co. for the development of coal mines, the manufacture of coke, etc. The capital stock is \$100,000.

Grafton-Water Works.—The city will hold an election in March to consider the proposition of Engineer Jackson, of Clarksburg, for the construction of a system of water works in Grafton.

Martinsburg-Ice Factory.—An ice factory will, it is stated, be established.

Moundsville-Steam Laundry.—It is reported that J. B. Alexander and others are preparing for the establishment of a steam laundry.

Moundsville-Planing Mill.—A planing mill is reported as to be established on the property of the Moundsville Mining & Manufacturing Co. by local capitalists.

Orlena-Flour Mill.—H. M. & M. L. Nestor, recently mentioned, have remodeled their flour mill to a full roller process of 35 to 40 barrels capacity.

Parkersburg-Gas, etc., Works.—B. D. Spillman and others have incorporated the Home Lighting & Fuel Co. for the manufacture of gas and electricity. The capital stock is \$250,000.

Princeton-Medicine, etc. Company.—W. M. Mahood and others have incorporated the West Virginia Medicine Co. to compound drugs, medicines, etc. The capital stock is to be not more than \$50,000.

Wellsburg-Terra-cotta Works.—The Brooke Terra Cotta Co., reported last week (under Wheeling) as incorporated, will be organized on February 2 with a paid up capital of \$50,000.

Wheeling-Iron Mills.—The Benwood Iron Works, the Riverside Iron Works and the Top mill of the Wheeling Iron & Nail Co. have consolidated for continuing operations. The combined capital stock will be nearly \$10,000,000.

Wheeling-Electric-light Plant.—The Whitaker Iron Co. is putting in an electric-light plant, as reported last week.

Wheeling-Cold storage Plant and Ice Factory, etc.—The Wheeling Ice & Storage Co. will increase its capital stock \$25,000 for the erection of a cold-storage plant.

Prospectus of the Carolina Sulphuric Acid Manufacturing Company.

The purpose of the Carolina Sulphuric Acid Manufacturing Company is to mine and sell pyrites ores, and also to manufacture sulphuric acid from pyrites.

Blacksburg, South Carolina, has been fixed upon as the most favorable site for the location of works. It is the crossing point of the main lines of two important railroad systems—the Richmond & Danville and the Charleston, Cincinnati & Chicago, which furnish direct routes to the large phosphate and fertilizing factories of North and South Carolina, Georgia and Florida, and give also competing routes to New York and the North.

A brief statement of facts will be of interest to those who are not already familiar with this industry.

A distinguished writer on chemistry and metallurgy, Professor N. P. Pratt, of Atlanta, Georgia, recently said: "Sulphuric acid enters into and is the basis of all manufactures and all heavy chemistry. It is called the king of acids, and the greatest of English chemists went so far as to say that the prosperity of a country is to be measured by the quantity of sulphuric acid it makes." Enormous quantities of sulphuric acid are used in making soda and bleaching powders. It is used in dyeing and bleaching works. It is a necessity in the manufacture of fertilizers. Phosphate rock, the basis of commercial fertilizers, is treated with sulphuric acid before it can be made available.

Once sulphuric acid was made exclusively from brimstone imported from Sicily. It was discovered that it could be made from an ore called pyrites, which, in the form used for the purpose, is a combination of iron and sulphur. This discovery broke up the monopoly that Sicily had held, but it led to a much more widely extended use of the acid, and the supply has never been far enough in advance of the demand to keep down prices or to restrict the shipment of brimstone from Sicily. The manufacture of the acid from pyrites has been one of the most profitable of all industries. The discovery and development of phosphates in Florida has already largely increased the need for sulphuric acid, and this increased demand has resulted in higher prices for brimstone.

The projectors of this Company have been for nearly two years looking for pyrites in the South in such quantity and of such purity as would justify the erection of works to utilize it. They have discovered veins in Western North Carolina far in advance of anything they had counted on in extent, accessibility and freedom from impurities.

The Company owns 4,213 acres of land, on which there are two veins of pyrites.

The largest one (called Vein No. 1, or "Mammoth Vein") is in Jackson county, N. C., three miles from Balsam Station, on the Western North Carolina Railroad, on a tract of 4,025 acres owned by the Company. Bald Mountain, on the Company's property, where an enormous "blow out" of pyrites occurs, is 5,700 feet high. This mammoth vein of pyrites shows a solid body of pure ore from the top of this mountain to the base, and over 400 feet wide. In addition to this enormous "blow out," the vein can be traced for miles on the property of the Company, showing a width of from 50 to 200 feet. (See expert's report attached.)

The short spur of railroad which the Company will build will connect this immense deposit with the Richmond & Danville system. Preliminary surveys show that no engineering difficulties will be encountered, nor any high grades or expensive construction work be needed. It is believed by experts that with this short branch constructed, the pyrites can be mined and put aboard cars at a cost not to exceed 15 cents per ton. Such favorable rates of freight are assured for this deposit (which will cost so little to mine, to handle and to transport) that this is certain to be the source of supply for acid for fertilizers and other manufactures in the New England, the Middle and the Southern States, for the mines and Blacksburg, where the acid works are to be, are both so favorably located that output of mines and factories alike can be delivered at a lower cost than is now anywhere attainable.

The quantity of pyrites on this Company's property in actual sight is beyond appreciable estimate. It is simply a mountain 5,700 feet high and hundreds of feet wide, containing an easily-reached and inexhaustible supply.

Vein No. 2 is situated in Gaston county, North Carolina, three miles from Crouse Station, on the Carolina Central Railroad, and two miles from the Chester & Lenoir Railroad. This vein is well defined with slate walls. The ore is solid and pure; no sand, flint or foreign substance of any kind in it. The vein is developed by a shaft thirty-six feet deep, with a drift seventy-two feet, showing a solid vein of ore four feet wide from the mouth of the shaft to the breast of the drift. This new drift runs directly under an old drift that was run in by the Confederate Government during the late war, and the shaft used now is one sunk by that government. There is another old shaft which was also sunk by that government, and which is about two thousand feet from the new opening. This shaft is 56 feet deep, and shows 8 feet of solid ore. This tract consists of 188 acres of land, and covers over one mile of the vein. The capacity of this vein is more than sufficient to furnish double the ore supply of the Company for years to come. This ore is of extraordinary purity, burns free, and carries fifty per cent. of sulphur. A contract for three years' supply at a very profitable price has just been closed by the Company with the Charlotte Oil & Fertilizing Company, of Charlotte, North Carolina, one of the largest, most wealthy and most successful manufacturing concerns in the South. One of the officers of this company made a personal visit of investigation to this vein, and, after a thorough examination into the extent and quality of the ore, he closed the contract. (See expert's report attached.)

The consumption of pyrites in the United States in 1881 was 8,000 tons. The annual consumption increased rapidly. In 1885 it was 96,400 tons, and in 1889 it had grown to 184,500 tons; in 1891 it was 250,000 tons, and it is estimated that over 300,000 tons will be used in 1892.

There has not heretofore been any large development of pyrites in the South, the supply having come mainly from Spain and Newfoundland. Nearly all the sulphuric acid works in the South still use brimstone as a raw material.

In the early part of 1890 the *Manufacturers' Record*, of Baltimore, published a series of articles on "Pyrites in the Southern States," written by Mr. W. H. Adams, a mining engineer and metallurgical expert having intimate knowledge of the subject. The following is from the first paper of the series, published February 1, 1890:

"The utilization of pyrites ores in manufacture of sulphuric acid, a problem fully

worked out in the Northern States during the past ten years, has as yet found few advocates in the South, a section of this country more deeply interested in the subject and to whose people greater benefits would accrue than are possible in any other.

"For over twenty years discussions have been going on and articles written for the technical journals calling attention to the wide difference in cost of sulphuric acid when manufactured from pyrites or the imported brimstone.

"Savannah, Georgia, and Beaufort, South Carolina, are the two cities south of Baltimore with factories built for manufacture of sulphuric acid from pyrites. All the other factories were built for and consume brimstone.

One ton of brimstone "seconds," cost to average, ex ship, at any of the seaboard works, ... \$31 00
This ton of brimstone will net say 95 units of sulphur, after loss in handling, storage, burning, etc.; of gas, etc., are fully allowed for.

Two and one-half tons of pyrites, containing net 95 units sulphur as above, can be laid down at seaboard factories for average cost of ... \$12 50

The difference in cost of equal amounts of sulphur is ... \$ 8 50

"By methods of working, now common throughout Europe and our Northern States, this difference is unquestioned, and for inland cities there would be a sure saving of \$7 to \$10 per ton of brimstone consumed. This means more than it casually shows. For a works turning three tons of brimstone daily it is 300x3x\$21=\$18 900, in gold, which is the minimum annual payment to foreign nations for brimstone and freights, not a dollar of which is retained in this country; it means 300x3x\$12.50=\$11 250, which should be paid annually for pyrites mined in this country, every dollar of which would remain in the South for her development.

"It means a loss to each factory consuming three tons of brimstone daily of \$7,650, sufficient to pay the annual salaries, interest and wear and tear of such a plant. On the basis of 50,000 tons of brimstone annually consumed for fertilizer products sold in the Southern States, it means an annual loss to the factories of the South of over \$350,000, the difference between cost of brimstone and pyrites; an annual payment to foreign miners and vessel owners of over \$1,000,000 gold; an annual loss to the working classes of our own country of over \$600,000."

Since this was written the price of brimstone has advanced, and the factories are now paying \$35 to \$37 a ton.

This Company can lay down at its works at Blacksburg from its own mines 2½ tons pyrites for less than \$5. The cost of raw material to this Company will therefore be not more than one seventh of the cost to works using brimstone; or, comparing the cost to this Company with what it will cost other factories using pyrites, the prevailing price of ore at the works is \$7 to \$8 a ton. It will cost this Company, delivered at its works from its own mines, less than \$2 a ton.

A factory consuming 75 tons of pyrites a day will pay annually for its raw material 75x365x\$7.50=\$191,625
The cost to this company would be 75x365x\$3.50=\$95,625

An annual saving on raw material alone in favor of this company of ... \$136 875

Besides the revenue from its works the Company will have a source of enormous profit in the sale of its ore to other works. It has now one contract to run three years for the sale of ore at a price that will pay an annual profit of more than \$10,000 over and above all expenses, including cost of mining, salaries and everything. One of the most competent judges in the country estimates that the Southern States will consume in 1892 more than 300,000 tons of pyrites. It is confidently believed, on the most reasonable and conservative grounds, that the Carolina Sulphuric Acid Manufacturing Co. can supply at least one third of this quantity. Imported ores are now selling at \$7 a ton at tidewater. This price can be had for ore shipped from this Company's mines. Ore from what has been called "Vein No. 1" or the "Mammoth Vein" can be mined and delivered at Charleston for considerably less than \$3 a ton, leaving a profit of more than \$4 a ton.

In the foregoing estimates all contingencies have been taken into account and the most liberal allowance made for any possible "extras."

After the extraction of the sulphur from the ore the residuum is sold to furnaces for the iron. Dr. Pratt, in a recent article, says on this point:

"An important item in the manufacture of sulphuric acid from pyrites is the iron that is left. The residuum from pyrites ore carries in the neighborhood of 60 per cent. of metallic iron, which is in ready demand at all furnaces at which it may be delivered. The foreign sellers of pyrites always reserve in their contracts the right to the disposition of this residuum, selling only the sulphur in the ore. All raw ore at the furnaces is roasted before being charged. By this process the sulphur is first utilized, and the ore is roasted at the same time, thereby saving a heavy outlay for wood in the calcination operations at the iron furnace. The residuum would be worth more than raw iron ore, because part of the ordinary work, that is to say, the roasting, has already been done. I should think the residuum would be worth \$4 a ton at the furnaces. That is about the ruling price of the limonite ores after calcination."

As a matter of fact the Charlotte Oil & Fertilizer Company are shipping their cinder to Birmingham at a price that nets them \$3.50 a ton.

The capital stock of this Company is \$1,000,000, of which \$650,000 is common stock and \$350,000 preferred stock carrying ten per cent. cumulative dividends. Of the common stock, \$450,000 is issued in payment of the two ore properties heretofore described, and which are owned in fee, without incumbrance and with perfect title. The remaining \$200,000 is left in the treasury for such subsequent use as the Company may determine upon. The \$350,000 preferred stock, divided into 3,500 shares at \$100 a share is offered for sale at par. Of the proceeds of the sale of this stock, \$250,000 will be required for the construction of the works and \$100,000 will be used as working capital. In addition to the ten per cent. cumulative dividends which the preferred stock will receive, a sinking fund of ten per cent. of the cost of the plant (that is \$25,000) will be set apart annually out of the earnings of the Company before the common stock will be entitled to dividend. This sinking fund, like the preferred stock dividend, will be cumulative and will provide at the end of ten years a sum of \$250,000 for the erection of new works. The common stock will be entitled to the earnings of the Company remaining over and above the dividends on the preferred stock and the sinking fund.

It is provided in the By-Laws of the Company (Article 12) that no bond of this Company shall be issued, nor shall any mortgage be made upon any of its property without the consent of at least seventy-five (75) per cent. of the preferred stock and fifty (50) per cent. of the common stock.

SUMMARY.

Cost of plant.....	\$250,000 00
Working capital.....	100,000 00
Preferred stock.....	\$350,000 00
Common stock.....	650,000 00
	\$1,000,000 00

PROFIT ON A PLANT USING 27,000 TONS PYRITES A YEAR.
ANNUAL PRODUCTION.

27,000 tons of ore consumed by the works will give 54,000 tons of 50° acid.

Allow 4,500 tons for loss and say

Selling price f. o. b., \$6.00.....	\$306,000 00
17,000 tons of cinder at \$2.50.....	42,500 00
Total gross return from works.....	\$342,500 00

The details of the estimate of the cost of production are as follows:

Pyrites, 27,000 tons, at \$2.00.....	\$54,000 00
Nitrate of soda, 810,000 pounds, at 2½ cents.....	16,500 00
Coal, 3,500 tons, at \$3.50.....	12,250 00
Breaking ore, 27,000 tons, at 30 cents.....	\$8,100 00
Foremen, \$1.00 per day.....	1,695 00
Chambermen, two, at \$1.50 per day.....	1,425 00
Acid blowers, two, at 75 cents per day.....	547 50
Charging men, twelve, at \$1.00 per day.....	4,380 00
Cinder carriers, twelve, at 75 cents per day.....	3,295 00
Boiler men, two, at \$1.25 per day.....	912 50
Yard men, four, at 75 cents per day.....	1,095 00
Extra man, one, at 75 cents per day.....	273 75
Boy, one, at 25 cents per day.....	91 25
Oil, lights, brooms, etc.....	\$730 00
Shovels and other tools, etc.....	270 00
Minor repairs.....	1,000 00
Interest, 8 per cent. on \$250,000.....	\$20,000 00
Sinking fund, 30 per cent.....	25,000 00
Insurance, 2 per cent.....	7,500 00
Superintendence, office and laboratory.....	\$2,500 00
Total annual expense.....	\$169,585 00

Total annual net profit from the works.....\$172,915 00
To this add profit on sale of 30,000 tons of ore at \$4.00.....120,000 00

Net annual profit.....\$292,915 00

It is conservative to calculate that during the year 1892 the company will sell 30,000 tons of ore from Vein No. 2. The price of Newfoundland ore at the following cities is:

Charleston, S. C.....	\$6 75 per ton.
Columbia, S. C.....	8 00 "
Atlanta, Ga.....	8 00 "

Making an average price per ton of \$7.58½.

Vein No. 2 is distant from—

Charleston, S. C.....	240 miles.
Columbia, S. C.....	160 "
Atlanta, Ga.....	227 "

Ore can be delivered, including all expense of mining, freights, etc.—

To Charleston, S. C., for.....	\$1 70 per ton.
To Columbia, S. C., for.....	1 30 "
To Atlanta, Ga.....	1 70 "

Calculating the price of the ore at \$7.00 per ton as an average, will net the Company over \$5.00 per ton, or \$150,000 from sale of ore.

Vein No. 2 is only 30 miles distant from where the acid works will be located. The completion of 2 miles of narrow-gauge track will enable the railroad to place their cars at the ore dump. No rehandling of the ore is necessary, as the narrow-gauge trucks are changed by the railroad by means of a "hoist." Ore can be delivered to the acid works at less than \$1.00 per ton, including all expense of mining, freight, etc.

The items of expense are calculated beyond what they will be. For instance, we allow 50 cents per ton for breaking ore; this is being done at Charlotte, N. C., for 5 cents per ton. Coal we place at \$3.50 per ton; it is offered to the Company at \$2.35 per ton. Ore we place at \$2.00 per ton; it will cost less than \$1.00 per ton. The sale of cinder we put at \$2.50 per ton; it is now sold by works not so well located at price that nets \$3.50. Instead of calculating the net per ton on ore sales at \$5.00, which our advantage of location will give, we put it at \$4.00 per ton. We place the price of acid at \$6.00 per ton; present quotations are very much higher. In calculating the items of expense and profit we have endeavored to be strictly conservative, and whilst the profits seem to be so large, yet the location of our mines and works almost in the heart of the immense phosphate region of the South, the purity of our ore and the quantity in sight, the small expense of placing it in market, the vast amount saved in freights on our ore by reason of our location, our admirable shipping facilities, and the low price at which we can secure our labor, all make our position so strong that active operations will demonstrate that the profits will be largely increased above the estimate made.

Report by J. SHEARSON HYLAND, M. E., Ph. D., M. A., on the properties of the Carolina Sulphuric Acid Manufacturing Company, situated in Jackson and Gaston Counties, State of North Carolina.

CHEROKEE INN, BLACKSBURG, S. C., January 14, 1892.

MAJOR J. F. JONES,

President Carolina Sulphuric Acid Manufacturing Company, Blacksburg, S. C.

Dear Sir—In accordance with your instructions I have examined the pyrites properties belonging to your Company, and now take pleasure in submitting the following report as the result of my investigations:

The properties consist of two tracts, 4,025 and 188 acres in extent, and respectively situated in Jackson and Gaston counties, State of North Carolina. They occur in the primary series of rocks, and contain two veins of iron pyrites.

The Jackson county tract is located in a region which in early geological times was subjected to the most intense metamorphism; in fact, to agencies which are understood to be most conducive to the formation of immense "leads" of mineral matter. The discovery of a great deposit of ore upon it is therefore not unexpected. A huge vein courses through the land, and can be traced over a large stretch of country along a line that runs East 16° South, and West 16° North. The vein, three continuous miles of which the Company owns, and which will be designated "Vein No. 1," has only been opened up on Bald Mountain, a lofty ridge 5,700 feet high, and upon the Company's property. This report will therefore only treat of that portion of the vein which the mountain contains. This mountain is distant 3½ miles from Balsam, a station on the Western North Carolina Railroad. The vein was discovered several years ago during a search for copper. On the extreme top of the mountain it is exposed in an open pit 14 feet deep. "Blow-outs" have been made at selected points on both flanks and ore struck in quantity. The most distant of these "blow-outs" have been measured and found to be 3,250 feet on the one slope and 683 feet on the other, reckoning from the pit on the summit. The walls consist of gneissose rock, whilst the cap is of quartzite more or less impregnated with pyritic material.

The vein runs through the mountain obliquely at an angle of about 45°. Taking the cap-rock as evidence, the dip of the vein will be slightly downwards in the direction of E. 16° S. The width averages 300 feet, but the vein broadens in a descending direction, the maximum width discovered being 330 feet. The vertical extension is proved by "blow-outs" to a depth of 550 feet; but the vein can be traced by float-ore down to the creek, which is 2,500 feet below the cap of the mountain. The length of the vein varies from 3,000 to 7,000 feet, the greatest length being, of course, found at the base of the mountain.

The second vein ("Vein No. 2") occurs in Gaston county, and is 3 miles distant from Crouse Station on the Carolina Central Railroad, and about 2 miles from Hardin

Station on the Chester & Lenoir Narrow Gauge Railway, a branch of the Richmond & Danville Main System. It is a well-defined vein with strong, firm walls of argillaceous slate, and is fed by numerous "stringers." It lies but a few feet below the level of the country. It crops out in numerous creeks and streams, and can be traced for about 2 miles along the trend, which is here N. 15° E. The Company owns one continuous mile of the "lead."

The vein is developed by a shaft 36 feet deep, with a drift 73 feet long, showing a solid mass of ore from the mouth of the shaft to the breast of the drift. The thickness, as shown in the drift, is from 3 to 4 feet, with an average of 3½; but the evidence suggests the expectation that the vein will widen out on going deeper down. The deposit was worked by the Confederate Government during the war. An old shaft sunk by that government, and 56 feet deep, is 2,000 feet from the one just mentioned, and is said to show 8 feet of solid ore. At the present time, a new shaft of capacious dimensions is being put down, with the view of running a level to cross cut the vein and increase the output of material. The pitch of the ore is found to be to the west.

The perpendicular depth of this vein cannot, owing to the nature of the deposit, be determined. It is evidently unlimited, and should be quite 500 feet. In this district, veins of similar mineral have been worked to several hundred feet without arriving at the extreme end, and without creating difficulties in the manner of drainage.

In colour the ore of both veins is brassy to lightest yellow, with occasional tints of silvery white. In texture it is strong and massive. It can, therefore, be raised in large blocks and shipped to market at a minimum of loss, whilst the proportions of "fines" after a long railroad haul will be insignificant. The grain is coarse in vein No. 1 and medium-sized in vein No. 2. The fracture is uneven to regular.

The ore is exceptionally pure. Vein No. 1 contains small isolated fragments of quartz, but no other foreign material. As the specimens examined came from portions of the deposit adjacent to cap-rock (quartzite), it is only reasonable to suppose that the quartz represents included fragments of the cap-rock, and that it will practically disappear when the main mass of ore is tapped. In opposition to vein No. 1, vein No. 2 does not show—at least to the naked eye—any definite trace of foreign admixture. The quality and excellence of this ore are remarkably constant.

The deposits offer no obstacles to mining operations. Vein No. 1 can be worked partly by drifts and partly by open cuts. In fact, such is the extreme hardness of the material and such the position of the vein that the ore can be quarried like granite or any other rock. Delivery of ore to a loading station at the foot of the mountain would be made by shutes. Vein No. 2 will be mined by levels. The roof will be of ore, which is sufficiently strong for that purpose. There should be no difficulty with the drainage at either locality.

As regards cost of mining, this will not exceed 15 cents at vein No. 1, and will not be greater than 25 cents at vein No. 2.

The quantity of ore is so enormous that the mind can hardly appreciate the vastness of the supply. Taking vein No. 1, Bald Mountain should contain at least 400,000,000 gross tons of ore. In order, however, to allow for all possible contingencies—contingencies which are not at all likely to occur—200,000,000 tons will be regarded as the available quantity. Supposing 1,000 tons be shipped daily and 300 days be considered as the number of working days per year, there is sufficient ore to last 650 years.

There is still two miles of undeveloped vein on the company's property not included in the above estimate.

As regards vein No. 2, this is capable of producing 1,200,000 tons of ore. Supposing 100 tons be shipped daily, there is sufficient mineral on the property to last for 7 years.

This latter estimate is, of course, based on a three-foot vein and only working to a depth of 500 feet. This vein is, however, wedge-shaped, with the smaller end at the surface, for it increases from 1 foot at the outcrop to 3½ in a depth of 28 feet. Besides, in the old 56 foot shaft sunk by the Confederate Government, the ore, according to reliable report, shows up to a thickness of 8 feet, while at the Long Creek mines in the immediate vicinity, a similar and apparently identical vein of pyrites is 18 feet wide at a depth of 130 feet. It is therefore highly probable that a proportionate increase in the thickness of vein No. 2 will occur as greater depth is attained, and that the above estimate does not adequately indicate the amount of ore obtainable above a 500-foot level. The ore of vein No. 2 can be placed on all Southern markets for less than \$2 per ton. Taking the price of Newfoundland ore at \$3, this will mean a net gain of at least \$6 per ton. Therefore, the profit from vein No. 2 alone will be \$7,200,000, an amount that represents a return of seven times the authorized capital of the company.

The question of transportation to the railroad presents no difficulties. As regards vein No. 1, the Company proposes to build a standard-gauge railroad from the trestle below Balsam up Dark Ridge creek to the foot of Bald Mountain. The route has been subjected to a preliminary survey, and is not fraught with any engineering difficulties. The grades will not be heavy nor the construction expensive. The base of Bald Mountain is about the same height as Balsam Station, on the Western North Carolina Railroad. Connection between vein No. 2 and the railroad will be effected by means of a narrow-gauge railway joining the Chester & Lenoir branch of the Richmond & Danville at Hardin.

These pyrites ores constitute a very high grade of material for the manufacture of sulphuric acid. A test shipment of over 30 tons was recently forwarded to the Charlotte Oil & Fertilizing Co., of Charlotte, North Carolina. It was found that the ores readily gave off their sulphur, and, being compact and strong, possessed the additional advantage of "standing up" in the roasting furnaces. No repeated stirring of the heated mass was required; no formation of clinkers or slag occurred, but the ores became porous and allowed the ready escape of the gas, and accordingly the full desulphurization of the material. In this regard it is far superior to the Newfoundland ore, which demands constant attention to prevent the caking that renders the complete extraction of the sulphur extremely difficult. On the strength of this shipment, which was a representative one, and after a personal investigation of the property, the Charlotte Company has contracted with your Company for a three years' supply of ore.

The residue obtained after burning is peroxide of iron, purplish red in colour, and commonly known on the English market as "purple ore" or "Blue Billy." It is generally used for setting puddling furnaces, but is also smelted to a large extent, being added to the blast furnace charge in the proportion of 25 per cent. of the amount of solid ore.

In physical character, purity of composition and burning qualities, these ores are decidedly superior to the imported product. There is no doubt, in my opinion, that they will successfully compete with the Newfoundland ores, and eventually supplant them in the market. In view of the magnitude of the deposits and their exceptional purity, the successful career of your Company is assured. The demand for the raw product is daily becoming larger, having grown since 1881 from 8,000 tons to 250,000 tons in 1891; whilst the market for the manufactured article is enlarging, sulphuric acid being essential to numberless industries, and especially indispensable to the immense and continually increasing manufacture of phosphates and fertilizers. The possibilities of the trade in the near future are practically unlimited; and the possession by your Company of such inexhaustible deposits, combined with your excellent transportation facilities, should tend to place you in a position to stock and control the markets of the country.

I am, dear sir, your obedient servant,

J. SHEARSON HYLAND, M. E., Ph. D., M. A., of London, England.

Formerly of Her Majesty's Geological Survey of the United Kingdom.

NOTE.—A few hundred yards west of vein No. 2 there is an outcropping of limonite, having the well-known honey-comb character. It is probably nothing else but the decomposed top of another pyrites vein. On the Jackson County tract chrome-iron in quantity occurs. J. SHEARSON HYLAND

CAROLINA SULPHURIC ACID MANUFACTURING COMPANY.

CHARTERED UNDER THE LAWS OF SOUTH CAROLINA.

WORKS TO BE ERRECTED AT BLACKSBURG, SOUTH CAROLINA

OFFICERS.

JOHN F. JONES, President. T. H. B. HAASE, Vice President and General Manager.

I. B. GAUTIER, Secretary and Treasurer. PROF. GIDEON E. MOORE, Chm. Chem. and Engineer.

DIRECTORS.

JOHN F. JONES. T. B. GAUTIER. T. H. B. HAASE.

F. B. ALVORD. THOMAS GAUTIER.

MACHINERY WANTED.

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Belting.—E. H. Bates, Hammond, Texas, will want belting.

Belting.—M. C. Cronise, Bote out, Va., wants prices on belting of all kinds.

Boiler.—E. H. Bates, Hammond, Texas, will want a boiler.

Boiler.—Sol Elgutter, Newellton, La., needs a two flued steel boiler, 16 feet long, 36 inches in diameter and with 30 feet of stack.

Boiler.—The Spring Garden Water Works Co., Spring Garden, Ala., wants boiler.

Boiler and Engine.—L. D. Hutchinson, West Point, Ga., wants a 30 horse power center stroke engine and a 40 horse power boiler with Hancock inspirator, with all piping to connect boiler and engine and inspirator to water tank; engine to have two driving wheels, one of which must have 6 or 8 for rope.

Boiler and Engine.—M. C. Cronise, Botetourt, Va., wants prices on 4 and 5 horse-power boiler and engine.

Boiler and Engine.—T. A. Andrews, Greenville, Ga., wants a 40 or 50 horse-power engine and boiler; second-hand preferred.

Boiler and Engine.—The Brooke Terra Cotta Co., Wellsburg, W. Va., will buy boiler and engine from 60 to 100 horse-power.

Boring Machine.—W. D. Snow, Birmingham, Ala., will want a boring machine.

Brick Machinery.—J. W. Hunter, Dodd, Texas, wants prices on brick machinery (stiff mud machines).

Brick Machinery.—The Brooke Terra Cotta Co., Wellsburg, W. Va., will buy dry press brick machinery.

Can Machinery.—E. Napier, Montgomery, Ala., desires full information concerning the manufacture of cans.

Canning Factory.—Outfit for canning factory will be needed if organization of company now proposed is completed. Callaway & Green, Little Rock, Ark., can be addressed.

Coke Ovens.—Grisaold & Nunan, Owensboro, Ky., want prices on complete outfit for a coke plant of 50 ovens.

Corn Mill.—A. A. Walden, Belton, Texas, wants a corn mill.

Corn Mill.—E. H. Bates, Hammond, Texas, will want a roller corn mill.

Corn Mill.—Elihu Adams, Duffield, Va., wants to purchase a small corn mill.

Corn Mill.—Stapp Bros, Corydon, Ky., will want complete outfit for a 75-barrel corn mill (full roller syst. m).

Corn Mill, etc.—H. C. Hunter, Dodd, Texas, wants a corn and feed mill.

Corn Sheller.—J. V. George, Aiken, S. C., will purchase a corn sheller.

Cotton Gins.—A. A. Walden, Belton, Texas, wants four 70 saw cotton gins and other fixtures.

Cotton Gins.—E. H. Bates, Hammond, Texas, will want 3 cotton gins, feeders, condensers and press.

Cotton Gin, etc.—L. D. Hutchinson, West Point, Ga., wants an 80 saw cotton gin, with feeder, condenser and press.

Cotton Gin, etc.—T. A. Andrews, Greenville, Ga., wants 4 or 5 cotton gins, with steam press, elevator and feed conveyors.

Creamery.—The Bristol Butter & Cheese Co., G. P. Cannon, secretary, Bristol, Tenn., will purchase a complete creamery outfit.

Diamond Drills.—James L. Hamill, Graham, Va., desires addresses of diamond drill manufacturers.

Dredging Machinery.—H. von Schon & Garner, Fredericksburg, Va., will probably want dredging machinery.

Drill Press.—The Potomac Novelty Co., Alexandria, Va., wants a second-hand drill press of 30 to 30-inch swing.

Dummy Engine and Coach.—The Columbus Street Railway & Power Co., Columbus, Miss., will buy a dummy engine and coach.

Dump-cars.—Carter M. Braxton, Newport News, Va., wants to purchase a number of narrow-gauge dump cars for construction work.

Electric-light Plant.—An Elizabeth City company is open to propositions for the erection of an electric light plant. Address George M. Scott, Elizabeth City, N. C. E. F. Aydtlett, of Elizabeth

City, who probably represents this same company, writes to the MANUFACTURERS' RECORD saying that contract will be made within 10 or 15 days for 2 boilers of 50 horse power each, 1 engine, 85 to 90 horse-power; 1 arc dynamo, 35 to 40 light, 2,000 candle-power each; 1 incandescent dynamo, 500 to 650 lights, 15 candle power each, and all fixtures, etc.

Electric-light Plant.—The De Land Manufacturing Co., De Land, Fla., is in the market for a complete outfit for electric-light plant (except dynamos).

Electric Motor.—The Collins-Beach Varnish Co., Louisville, Ky., will want an electric motor.

Engine.—John Sprewell, West Point, Miss., wants prices on an engine.

Engine.—Sol Elgutter, Newellton, La., needs an Atlas engine, 9x12 cylinder, complete.

Engine.—A. Walton & Son, Gurleys, Ala., desire to exchange a stationary engine for a portable one.

Fan.—T. C. Fuller, Macon, Fla., wants bids on an exhausting fan for sucking ground phosphate from mill.

Flour Mill.—E. H. Bates, Hammond, Texas, will possibly want a small flour-mill outfit.

Flour Mill.—J. V. George, Aiken, S. C., will purchase a smut machine, a wheat thresher or separator and a bolting cloth.

Flour Mill.—Stapp Bros, Corydon, Ky., will want complete outfit for a 75-barrel full roller system flour mill.

Gas Engine.—The Collins-Beach Varnish Co., Louisville, Ky., will want a gas engine.

Grinder.—C. L. Wilson, Homeland, Fla., wants to purchase a small mill to grind phosphate rock; say about 15 or 20 tons daily.

Harness and Saddle Factory.—J. A. Shuping, Morganton, N. C., wants to purchase machinery, tools, trimmings, etc., for harness and saddle factory.

Heading Machinery.—The Geo Campbell Co., Moseley's Junction, Va., wants a complete outfit of barrel-heading machinery, second hand.

Hoisting Engine.—E. Bynon, Carbon Hill, Ala., wants prices on a second-hand double cylinder hoisting engine, 10x12, with drum, second-hand.

Hoop and Heading Machinery.—D. S. Hale, Hale's Mill, Va., may possibly want hoop and heading machinery.

Ice Machine.—Outfit for a 10-ton ice plant will be wanted. Address F. M. Jones, Clifton Forge, Va.

Implements.—Farming implements will be needed. Address William Penrose, Baltimore, Md.

Iron.—T. C. Fuller, Macon, Fla., wants bids on strip iron punched and countersunk for laying on rails of wooden tramway about 1½ miles long.

Lath Machinery.—H. S. Cripps, Craig City, Va., wants lath machinery.

Lathe.—The M. T. Co., Box 104, McColl, S. C., wants a woodturning lathe.

Lathe.—The Potomac Novelty Co., Alexandria, Va., wants a second-hand turret lathe of medium size.

Lathes.—The Geo. Campbell Co., Moseley's Junction, Va., wants power lathes for hardwood turning, second hand.

Laundry Machinery.—The Americus Steam Laundry Co., Americus, Ga., wants to purchase a mangle and washer.

Mining Machinery, etc.—The Southern Equipment Co., Chattanooga, Tenn., wants catalogue and prices on machinery for mining, screening and handling coal.

Mortiser.—C. Motz & Son, Lincoln, N. C., will buy a mortiser.

Nail Machines.—The Potomac Novelty Co., Alexandria, Va., wants complete catalogues and prices of wire-nail machines.

Oil Mill.—F. R. Sherwood, secretary, Galveston, Texas, desires to correspond with manufacturers of outfit for cottonseed-oil mill.

Paint Mill.—J. H. Pratt, 1826 Third avenue, Birmingham, Ala., wants bids on a complete outfit of latest improved machinery for metallic paint mill to grind red fossil ores; about 20 tons daily capacity; also plans and specifications of a well-arranged plant.

Phosphate Plant.—J. H. Pratt, 1826 Third avenue, Birmingham, Ala., wants bids on a complete outfit of the latest improved machinery for mining, washing, drying and handling land and river phosphate pebble. Capacity required for land pebble about 400 tons gross material daily, yielding about 100 tons dried pebble.

Planer.—The Springfield Boiler & Manufacturing Co., Springfield, Ill., wants a boiler-plate planer.

Planer, etc.—Burgess, Lineberry & Co., Rancœur, N. C., want prices on planer and matcher to dress about 5,000 feet of lumber daily.

Power Hammer.—The Springfield Boiler & Manufacturing Co., Springfield, Ill., wants a power blacksmith hammer.

Power Plant.—Stapp Bros, Corydon, Ky., will want power plant for the corn and flour mill mentioned above.

Pulleys, etc.—E. H. Bates, Hammond, Texas, will want pulleys and shafting.

Pulverizer.—F. S. Culver, secretary, 719 Thirtieth street, N. W., Washington, D. C., may later on need a cyclone pulverizer.

Pump.—A. A. Walden, Belton, Texas, wants a steam pump and injector.

Pump.—C. Motz & Son, Lincoln, N. C., want a force pump to throw a 1½-inch stream.

Pump.—E. Bynon, Carbon Hill, Ala., wants a second-hand W. S. Cameron pump.

Pump.—The Spring Garden Water Works Co., Spring Garden, Ala., wants pump.

Rails.—E. Bynon, Carbon Hill, Ala., wants prices on 50 or 60 tons of relaying rails, 56 pounds per yard, and on 10 or 12 tons of mine rails, steel or iron; also 2 stub switches, 1 split switch, with frogs, splices and bolts, etc.; all second-hand.

Rails.—G. B. Abercrombie, Houghton, La., will want 30-pound steel rails.

Rails.—The Columbus Street Railway & Power Co., Columbus, Miss., will want new 40-pound steel rails, with spikes, bolts, etc.

Riveter.—The Springfield Boiler & Manufacturing Co., Springfield, Ill., wants a steam riveter.

Rock Crusher.—I. T. Avery, Morganton, N. C., wants catalogues and prices of rock crushers.

Roofing.—Pyles & Morrison, Mansfield, Texas, want prices on 40 squares of iron roofing.

Roofing.—A. A. Walden, Belton, Texas, wants 25 squares of corrugated iron roofing.

Rope Machinery.—W. B. Jones, Frost, Texas, wants prices on machinery to make cotton rope.

Saw.—C. Motz & Son, Lincoln, N. C., will buy a band saw.

Saws.—The M. T. Co., Box 104, McColl, S. C., wants to buy a scroll saw and band saw.

Shaper.—The Potomac Novelty Co., Alexandria, Va., wants a second-hand shaper of about 9 inch stroke.

Shingle Machinery.—H. S. Cripps, Craig City, Va., wants shingle machinery.

Shingle Mill.—Gebert Bros, New Iberia, La., will purchase a shingle mill with capacity of from 150,000 to 200,000 daily.

Stave Machinery.—D. S. Hale, Hale's Mill, Va., may possibly want stave machinery.

Stone Crusher.—H. von Schon & Garner, Fredericksburg, Va., may need stone crusher and roller.

Tobacco Factory.—Prices on machinery for tobacco factory are wanted. Address E. C. Sloan, Taylorsville, N. C.

Trip Hammer.—The Hampton Manufacturing Co., Hampton, Va., wants to purchase a common or cushioned trip hammer with 60 or 80 pound head, new or second-hand.

Wagon Factory.—H. Jeff. Davis, Waynesboro, Ga., wants full outfit for manufacturing one and two horse wagons.

Water-wheel.—H. S. Cripps, Craig City, Va., wants a water-wheel.

Water-wheel.—J. V. George, Aiken, S. C., will purchase a water wheel.

Woodworking Machinery.—Furgess, Lineberry & Co., Rancœur, N. C., want prices on wood-working machinery.

THE HAMPTON MANUFACTURING CO., HAMPTON, VA., desires to correspond with manufacturers who make a specialty of jail work, locks, etc.

JAS. L. HAMILL, of Graham, Va., wants addresses of companies that prospect for coal by contract.

THE GLEN ALPINE SHOE FACTORY, of Glen Alpine, N. C., wants addresses of last manufacturers.

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I offer for sale valuable Timbered Lands, containing 16,377 ACRES, situated in Pickens county, South Carolina, adjoining the North Carolina State line, on water of Eastatoe and Toxamay. These lands are all in original forest, the best timbered lands in the State containing chestnut oak, white oak, red oak, hickory, pine, spruce pine, poplar, dogwood, &c. A good investment.

I have also 5,000 POUNDS OF CLOUDED MICA FOR SALE.

J. E. HAGOOD,

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Combined Ripping, Cross Cutting and Dadoing Saw-Bench Machine.

The accompanying cut shows a new combined ripping, cross-cutting and dadoing saw-bench machine which possesses new and valuable improvements. In designing this machine an effort has been made to

The latter, an entirely new device for operating the saw, is provided with counter weights which are adjustable in all directions. The system of levers is such that the foot need only be raised 10 inches off the floor to move the saw its full stroke, 24 inches. The pressure required is slight and uniform, regardless of the position of the saw, and, without doubt, it is easier to

The Otis Electric Pump.

With the marked improvement of the electric motor, and rapid extension of the electric power lines, there has grown a popular demand for electric machinery of all kinds.

To supply this demand, and to fully meet the exacting requirements of this service,

tion are many, prominent among which is its entire freedom from the shock, jar, or water-hammer, the economy in power naturally resulting from the constant motion of the column of water, as it does not require as much power to keep a body in constant motion as it does to move it with an alternate starting and stopping motion.

Another advantage arising, as a natural result of the continuous action, is the even distribution of the work at all points of the revolution of the pump, thereby creating a uniform resistance to the action of the electric motor. This is absolutely necessary to insure durability, as an intermittent or variable resistance to the motor would soon cause the total destruction of the armature winding and necessitate expensive repairs.

The continuous acting principle, upon which all of these pumps are constructed, avoids all harsh, noisy and unsteady operation.

For domestic use and other light services they are eminently adapted wherever it is possible to connect with the lines of the electric lighting or power circuit.

This pump is automatic in its action, and always keeps the tank full, without requiring attention or the services of an attendant, the action being as follows: There is placed at the tank and in the electric circuit, a switch or cut-out, which is operated by the action of a float, as it rises and falls with the water; for instance, when the tank has filled to the desired height, the float acts to cause the switch to break the circuit and stop the pump until the water-level is lowered by drawing from the tank, and the float descends and causes the switch to again complete the circuit and start the pump, to again fill the tank, when it will again be stopped, until more water is drawn out. This is a very important feature, as it is extremely gratifying to know that there is always a supply of water ready for immediate use without the constant daily attention.

Other features for consideration claimed by the manufacturers are that these pumps are cheap in first cost, cheap to run, cheap to maintain; they are noiseless; they are clean; perfectly safe—no explosions; always ready for operation; do not get out of order; require no coal—thus avoiding ashes, dust and dirt; there are no gases, no offensive odors; little or no attention is required, it being only necessary to refill the oil cups about once in two weeks.

These pumps are particularly adapted to furnishing water for domestic use, for office buildings, for irrigation, for watering live stock, for protection in case of fire, operating elevators, as well as for many other purposes.

An Improved Rotary Drying Machine.

The Worrell drying machines have now been in very successful operation for nearly ten years on a variety of wet and damp

make it economical, i. e., a saw-bench which is capable of executing work with dispatch and absolute accuracy, while the time required for adjusting the parts for different kinds of work is reduced to a minimum.

Very little attention is required in running the machine, as the journals are of steel of large diameter, journal boxes of extra length lined with the very best babbit metal, and all provided with automatic oil chambers, thus admitting of a high rate of speed without perceptible wear or tremble.

The machine has no complicated devices to get out of order, no minute nuts or screws to be twisted off; all working parts are easy of access, and where necessary are arranged to compensate for wear. The frame is one solid casting, with the metal so disposed as to form the most rigid support for working parts. The belt which transmits the power from countershaft to saw arbor is endless, of unusual length and width, and is strained by a tightener placed in such a position that during the entire travel of the saw the tightener moves vertically less than three inches, thus producing an even tension at all times, the weight being sufficient to maintain the speed of the saw up to its full capacity. At the same time the belt is well preserved, as all the pulleys over which it passes are of large diameter, thus reducing the speed of tightener pulleys and extending the life of the boxes.

The saw carriage is mounted on rolls and travels on a heavy, rigid frame, which is adjusted vertically to regulate the depth of cut by means of worm and worm wheels so constructed as to make a quick adjustment—a device which is perfectly accurate and not affected by sawdust or dirt. The saw, which is 14 inches in diameter, will cut up to 4 inches thick and travels a distance of 24 inches. The length of travel and relative position of the saw and table, however, is controlled by the stops acting on the foot-treadle at front of machine, as shown.

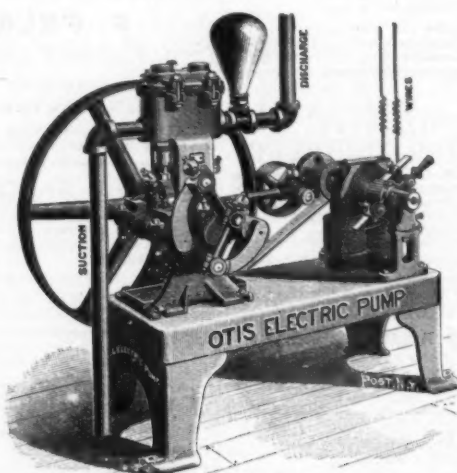
operate than any other machine on the market.

The right-hand table is arranged to swing upward, thus exposing the saw carriage and all surrounding parts, while the left-hand table has a lateral adjustment sufficient to place or remove saws or dado head and is absolutely accurate in its movement, thus preserving the alignment of tables and gauges at all times. The tables are graduated, and the cutting-off gauges may be set at any angle not exceeding 45 degrees. They are also fitted with tongues and auxiliary studs which admit of using them either as stationary or sliding gauges; the change from one to the other may be made instantly.

The machine is also provided with a ripping gauge, which is simple, effective and accurate, and can be set to any angle up to 45 degrees instantly, and it requires almost no time to apply it to the machine.

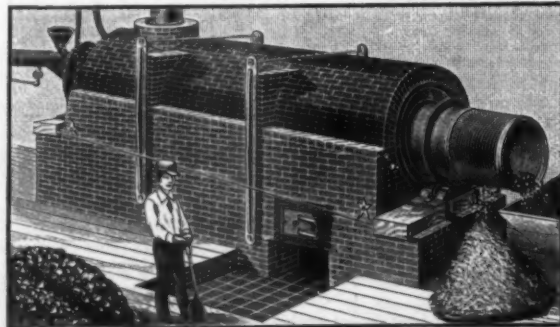
Specifications—Floor space required, 50 inches by 73 inches; tight and loose pulleys, 10 inches by 5 inches, and should run 900 revolutions per minute; weight, 1,600 pounds.

This machine is manufactured by the Williamsport Machine Co., Williamsport, Pa.



Otis Brothers & Co., have brought out the Otis electric pump, which is shown in the accompanying illustration.

This pump is claimed to be the embodiment of all that is desirable in electric



WORRELL'S ROTARY DRYING MACHINE.

pumps. It is constructed to operate upon a novel principle, the water being moved with a continuous and unvarying flow, entering at the suction, and passing through valved pistons, thence out at the discharge.

The advantages of this principle of ac-

substances, some of an exceedingly obstinate or delicate nature, which were, it is stated, never before satisfactorily dried artificially. They are considered to be the embodiment in the simplest manner of the application of forced circulations of large

volumes of hot air for rapidly absorbing and removing the moisture from different granular material; in fact, nature's process hastened by combustion and motion. They are the result of the inventor's 20 years' employment in the drafting and pattern-room, foundry and machine shop, building, operating and inspecting driers, including much study of the science of drying and many extended evaporating experiments on numerous products.

They are carefully built of the best material under the personal supervision of the designer, whose purpose is that they excel in durability, simplicity and compactness, combined with the most perfect and economical results.

The accompanying cut represents a new size and arrangement of these drying machines, designed to meet the wants of manufacturers of a moderate size at a moderate price.

The new construction, all external and clearly shown in the engraving, consists in the two across timbers, supported by solid brick extensions, on which are bolted the bed plates containing the chilled rollers that carry the inclined rotating drying cylinder, instead of the independent timber or iron stands used heretofore. The long tie bolts through the ends of these across timbers not only hold them securely into position, but also form a powerful end clamp on the furnace.

It will be noticed the ash pit is dropped below the floor, which reduces the cost of the furnace and lowers the height of the feed-pipe.

When permissible these features will be adopted in the larger machines.

The rapid air circulation for removing the moisture from the drying cylinder is here enforced by the inventor's special

nace irons, also complete detailed drawings and directions so clear as to enable any fair mechanic to set them up.

The manufacturer, S. E. Worrell, of Hannibal, Mo., has recently given much attention to drying, pulverizing and separating Carolina and Florida phosphates, and is prepared to furnish complete plants

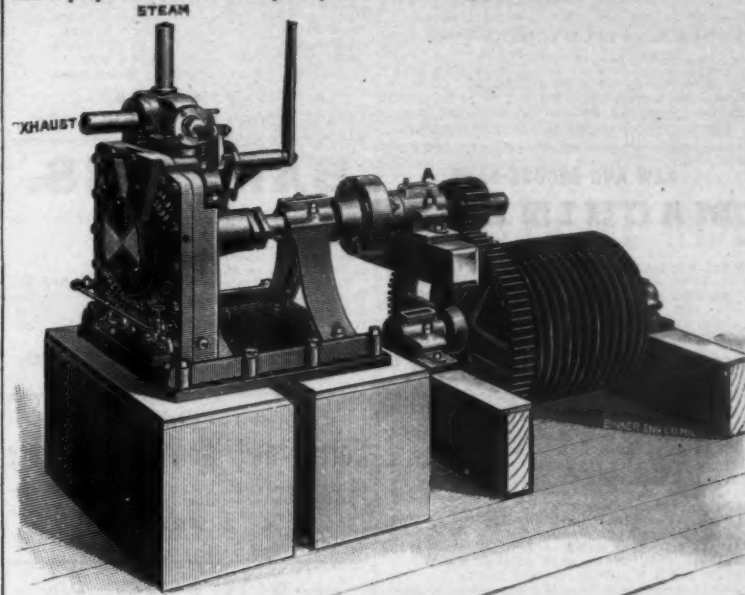


FIG. 1.

for this purpose of any desired capacity at a moderate cost. These driers are said to be exactly fitted for cheaply handling phosphate, the continued attrition loosening the clay from the phosphatic nodules, and the air current removing it in the form of

The Duke Steam Feed.

In the accompanying illustrations Fig. 1 shows how the Duke Engine Manufacturing Co.'s new steam feed may be applied. It is claimed by the manufacturers to possess many valuable features, a few of which may be enumerated:

1. Simplicity of construction.
2. Positive operation and easy management.
3. Economical use of steam.
4. Small space occupied.
5. Cheapness.

of the mill) in a position most convenient for the sawyer, and bolted to a timber running lengthwise underneath the husk frame, which forms the foundation. The shaft (to which the pinion is attached) can be made any desired length to suit conditions, and is coupled to the end of the engine shaft with flange couplings, as shown. It will readily be seen that this arrangement is suitable for running either the drum for rope feed or for moving the carriage with rack and pinion.

In placing the engine in position it is not even necessary to move the husk frame, as it can be lowered from above through the frame onto foundation. The movements of the engine in either direction is under absolute control of the sawyer by lever connecting with reverse valves on top of engine, thus accommodating the speed of the feed to the size and conditions of logs.

Fig. 2 shows the working parts of the steam feed.

There are no valves to set or outside connections to break; there are only three moving parts in all, the outer and inner pistons and crank, to which the main shaft is connected. Both pistons are connected to the crank, as shown. By an ingenious system of channels leading through the inner piston, four impulses of steam are given to the pistons at each revolution, they in turn imparting a perfect rotary motion to the crank, both pistons moving horizontally, and at the same time the inner piston vertically, the movement of the engine in either direction being under the perfect control of the sawyer.

In the manufacture of this "steam feed" only the best material obtainable is used; the workmanship is good, and every part proportioned to stand hard service. Further

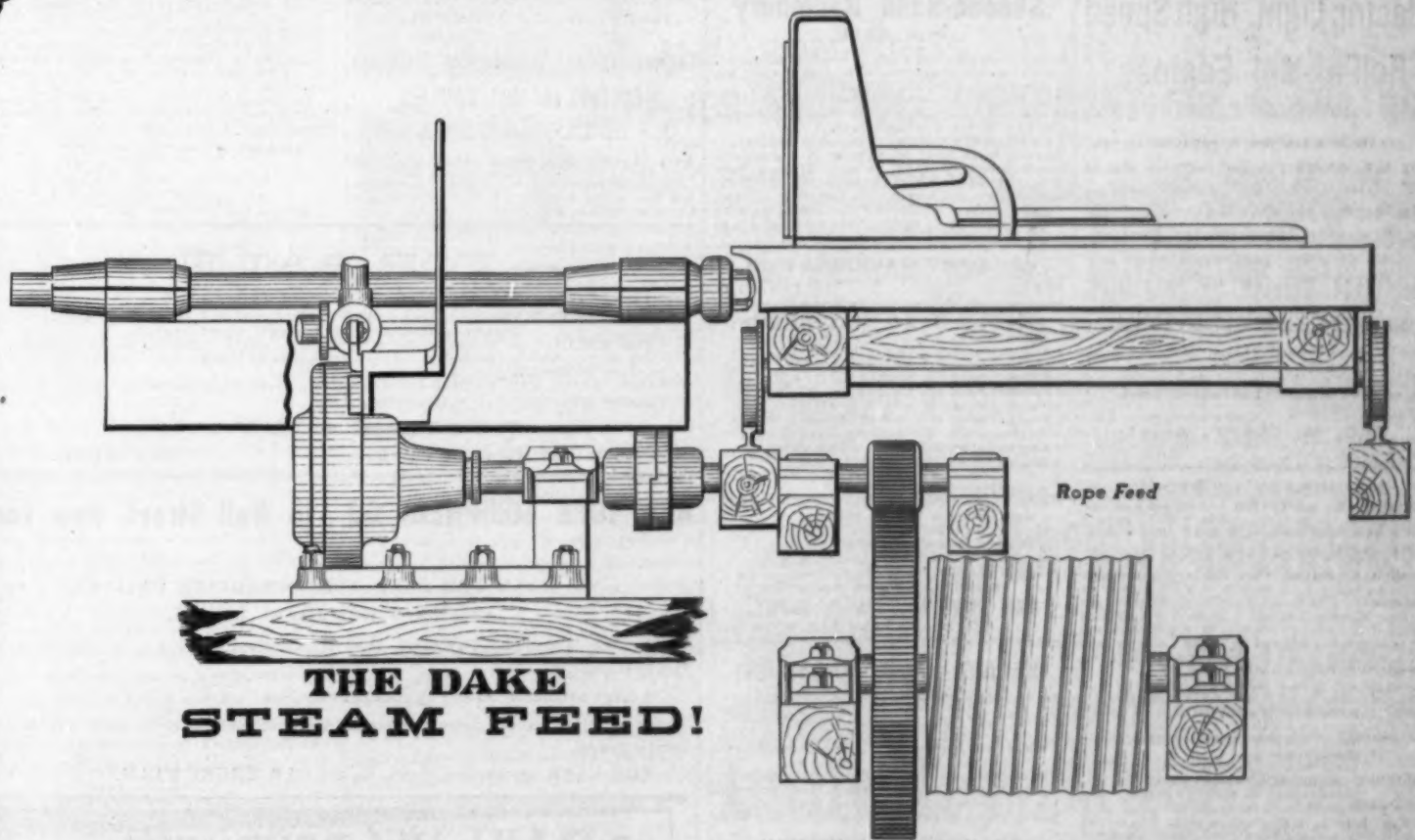


FIG. 2.

steam blower, which is located in the vapor-pipe, shown in the extreme left of the cut. For heavy duty a powerful rotary exhausting fan is connected to the vapor-pipe. The cylinder is rotated by the link-belt at this end of the machine.

This drier is just as carefully built as the larger sizes.

The builder furnishes all the fur-

dust, while the sand is sifted out by the rolling screen.

SOME prominent commission houses are calling the attention of their customers to some of the Southern securities. The belief is growing that the depression in the South has touched bottom.—Wall Street News.

6. Easy adaptation to either new mills or those now in use.

If it is desired to replace present friction feeds with this steam feed, it can be done at a very nominal expense for attachments. In replacing the rope feeds operated by friction, it is rarely necessary to change the position of the rope drum. The engine can be placed (in the husk or main frame

particulars can be had from the Duke Engine Manufacturing Co., Grand Haven, Mich.

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Engines, Automatic. Boring Mills.
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Crank Shapers. Pumping Engines.
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1 Iron Planer, 16 in. x 16 in. x 3 ft.

1 Planer, 20x30 in. x 4 ft. and 22x32 in. x 5 ft.

1 " 24x24 in. x 5 ft. and 6 ft.

1 " 30x30 in. x 10 ft.

1 " 32x32 in. x 10 ft. 42x36 in. x 12 ft.

1 " 36x36 in. x 10 ft.

1 " 72x60 in. x 15 ft. and 50x30 in. x 17 ft.

1 " 30x30 in. x 9 ft., with one head.

1 " 42x42 in. x 12 ft., with two heads.

Friction Shapers, 15 in., 22 in., 30 in.

Crank Shapers, 12, 16, 17, 20, 24 in. ad. stroke.

1 each Nos. 1, 2, 3, 4 Wire Feed Screw Machines.

1 each Nos. 5 to 8 Screw Machine. Power Feed.

1 each 2, 4 and 6 Spindle Gang Drills.

1 Crank Planers. 12 No. 7 Lincoln Pat. Millers.

1 each Nos. 51, 52 and 53 Ferracute Presses.

1 No. 3 Stiles & Parker Geared Press.

1 No. 24 in. Fowler Press. 10 Foot and Power

No. 1 Bliss Foot Presses. [Presses.]

12 Punching and Shearing Machines, assorted.

1 Bolt Cutter, each 1/2 to 1 in. and 1/4 to 1 in.

1 26 in. Gear Cutter.

1 each 48, 60 and 72 in. Radial Drill.

1 New Horizontal Boring Machine with facing attachment. Newark Mach. Tool Co., makers.

1 48 in. Gear Cutter. 1 Power Mortising Machine.

1 30 in. Pulley Lathe. 2 Profiling Machines.

1 16x12 in. Valley Automatic Engine.

1 16 in. Upright Drill. 3 Cam Cutters.

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ENGINE LATHES—13 in. x 6 ft., 14 in. x 6 ft., 15 in. x 6 ft., 16 in. x 6 ft., 18 in. x 6 ft., 18 in. x 7 ft., 18 in. x 8 ft., 20 in. x 7 ft., 20 in. x 8 ft., 21 in. x 8 ft., 21 in. x 10 ft., 22 in. x 10 ft., 24 in. x 10 ft., 26 in. x 12 ft., 28 in. x 16 ft., 31 in. x 14 ft., 32 in. x 16 ft., 33 in. x 18 ft., 33 in. x 12 ft., 33 in. x 30 ft., 38 in. x 16 ft., 50 in. x 22 ft., 72 in. x 17 ft., 84 in. x 16 ft. Gap Engine

Lathe 24-in. swing over bed, 48-in. swing in

gap, 26-ft. bed, with raising block to make 36-in.

swing over bed, and 60-in. in gap; Gap Engine

Lathe, 19-in. swing over bed, 35-in. swing in

gap, 15-ft. bed.

IRON PLANERS—24 in. x 24 ft., 24 in. x 24

in. x 25 ft., 24 in. x 24 in. x 26 ft., 26 in. x 24 in. x 25 ft.,

28 in. x 28 in. x 6 ft., 28 in. x 28 in. x 8 ft., 30 in. x 30

in. x 7 ft., 30 in. x 30 in. x 8 ft., 32 in. x 32 in. x 10 ft.,

36 in. x 36 in. x 10 ft., 54 in. x 42 in. x 24 ft., two

heads, 62 in. x 42 in. x 16 ft.

UPRIGHT DRILLS—26 in. swing, 28 in. swing,

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SHAPING MACHINES—9 in. stroke, 11 in.

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2 No. 3 Bannard Milling Machines, back-geared.

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UPRIGHT ENGINES—6 in. x 7 in., 7 in. x 7 in., 8

in. x 8 in.

HORIZONTAL ENGINES—6 in. x 9 in., 6 in. x 10

in., 14 in. x 30 in., Corliss.

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ing, Ingersoll No. 11 Rock Drill.

Iron Planers 20 in. x 22 in. x 35 ft. 30x36 ft. 24x24 ft.

Engine Lathes, nearly new, 21 in. x 14 ft., with

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Universal Milling Machine, complete.

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1 Planer, planes 6 ft. 24x24 in.

1 Planer, planes 5 ft. 24x24 in.

1 Planer, planes 4 ft. long, 19 in. x 19 in.

1 Engine Lathe, 16 ft. bed, 18 in. swing.

1 Engine Lathe, 9-ft. bed, 24 in. swing.

1 Engine Lathe, 16 feet bed, 28 inch swing.

1 Engine Lathe, 10-ft. bed, 25 in. swing.

1 " 6 " 18 "

1 20 inch Plain Drilling Machine.

1 26 in. Stevens' Pulley Lathe.

1 9 inch Hewes & Phillips Shaper.

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TRADE NOTES.

THE cotton compress shed at Charlotte, N. C., and the Henderson Cotton Mills, Henderson, Ky., have been equipped with the swinging hose-rack made by John C. N. Guibert, 115 Broadway, New York.

THE Canton Saw Co., of Canton, Ohio, sends out the following notice to the trade: "On morning of 15th inst. our works, tempering, grinding and woodwork departments, were partially destroyed by fire. While this will cause some delay in filling our orders, yet we expect to be able to ship again during next week. Our mill-dog department has not been damaged, and there will be very little delay in filling orders for mill dogs."

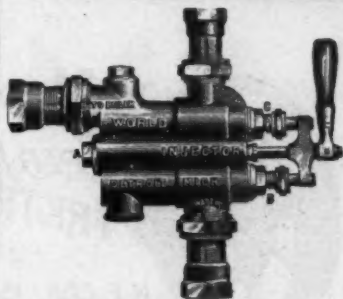
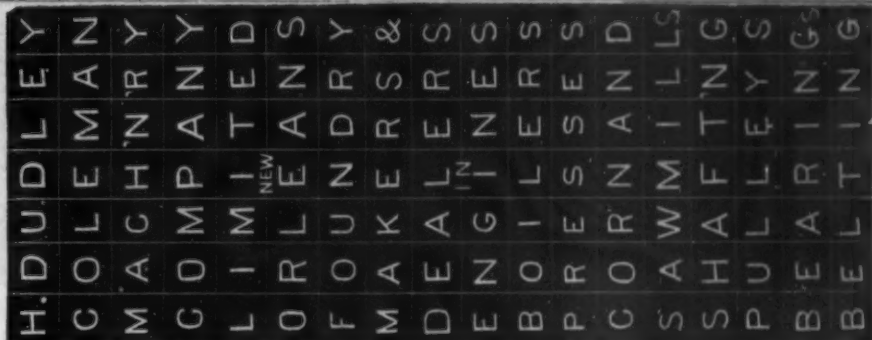
THE four-story "Terminal" Hotel, at West Point, Va., with all its furniture and fittings, is advertised in this issue of the MANUFACTURERS' RECORD to be sold at commissioners' sale on February 13. West Point is a thriving town with a very bright future, and the "Terminal" property ought to prove a fine investment. The hotel has a fine business, and is a popular place as a summer resort. Full particulars can be obtained from the commissioners.

THOS. K. CARRY & BROS., of Baltimore, have issued to the trade a January list of engines, boilers and machine tools as in stock. They state that they can furnish an engine of whatever capacity needed upon the shortest possible notice. They also carry a full line of machinists' small tools and supplies, Dodge wood split pulleys, shafting, hangers, leather and rubber belt, bolts and nuts, machine screws, drills, etc.; in fact, everything necessary for fitting out and supplying a well equipped machine shop.

A PRICE LIST and catalogue of tools and machinery manufactured by Wells Bros. & Co., of Greenfield, Mass., has been issued to the trade. Messrs. Wells Bros. & Co. are the manufacturers of screw-cutting tools and machinery bearing the trademark of "Little Giant," a designation for the superior strength and general excellence of their specialties. This firm has enjoyed a large patronage for a number of years, and they enter upon the present year with better facilities and such prices as must command inspection. The catalogue will be mailed on application.

J. H. ELLER & Co., Canton, Ohio, have recently removed to more commodious quarters. A large new building has been erected, with equipments of the most approved pattern. Messrs. Eller & Co. have a well-known industrial enterprise. They are recognized as of the leading manufacturers of patent steel roofing, corrugated roofing and siding, decorated iron ceilings, galvanized steel eave troughs, expanding conductor pipes, chimney tops, etc. The success which this firm enjoys is attributed to superiority of goods and the executive skill in the conduct of all the departments of their large enterprise. Catalogues and price-lists will be mailed the trade.

THE Van Winkle Gin & Machinery Co., of Atlanta, manufacturers of cotton gins and presses, cottonseed-oil machinery and refrigerating machines, has recently erected ice plants at La Grange, Ga., for the La Grange Ice Co.; at Florence, S. C., for the Florence Improvement Co.; at Lake Providence, La., for Lake Providence Ice Co.; at Atlanta, Ga., for Peck & Son. Oil-mill machinery has been furnished to the Planters' Oil Co., of Monroe, La.; Bonham Oil Co., of Bonham, Texas; Greenville Oil & Cotton Co., of Greenville, Texas; Jackson Oil & Fertilizer Co., of Jackson, Ga. The Van Winkle Co. manufactures Keeling's improved automatic ice machine,



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and will furnish full particulars about it upon application.

C. W. TANNER & Co., at Richmond, Va., are the exclusive selling agents for "The Ricinate Fire-proofing Co. of Virginia." The company has only been incorporated since April last. Much of its work has been of an introductory character, but it has already met with great success. Messrs. Wm. Cameron & Bro., of Petersburg, Va., who have suffered considerable loss by fire, have ordered several thousand gallons of "Ricinate," which is being applied to their large tobacco factory in the most thorough manner. Ricinate is accepted as being a positive protection against fire. Circulars explaining its use and general merits will be mailed by C. W. Tanner & Co. from Richmond, Va.

THE Morton Safety Heating Co., of Baltimore city, controls valuable patents in stored heat for heating railroad and street cars. The system combines very many valuable features, the principal one of which is absolute safety, with economy in the use of fuel. The extent of the work that has already been accomplished by the company in introducing its system is clearly set forth in a neat and attractive pamphlet, which will be mailed on application to the company at the office in Baltimore, 106 East Saratoga street, or 45 Broadway, New York. It contains a cut of a car equipped with the improved earthenware tubes, with explanation in detail as to how they are used and controlled; also testimonials from corporations who have adopted the system of the Morton Safety Heating Co.

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MANUFACTURERS of the best metal for journal bearings of any kind—specialty for Steamships, Railroad and Street Cars, Sugar Mills, Rolling Mills, Saw Mills, etc. Especially adapted to high speed journals. This metal is warranted not to HEAT OR CUR the journals, and its lasting qualities make it superior to any other metal. Its excellence makes it the most economical metal.

It is Self Lubricating.

It is tougher and more durable than all other metals.

It is the best metal known where great pressure is required.

It runs with less friction than any other metal.

It will stand the highest rate of speed and will not heat or cut.

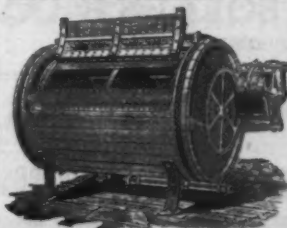
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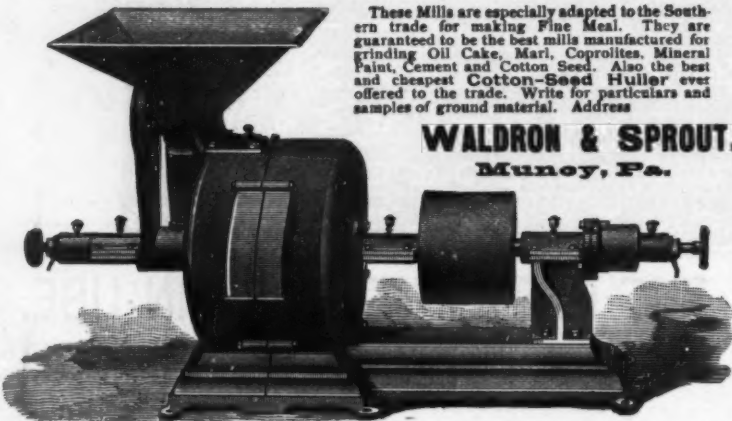
222 Washington Street,
CHICAGO, ILL.

40 Cortlandt Street,
NEW YORK.

No. 100 to 100 W. Pearl Street,
CINCINNATI, O.



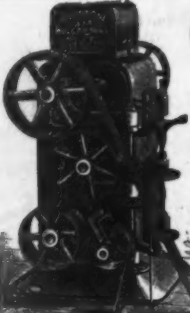
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These Mills are especially adapted to the Southern trade for making Fine Meal. They are guaranteed to be the best mills manufactured for grinding Oil Cake, Meal, Coprolites, Mineral Paint, Cement and Cotton Seed. Also the best and cheapest Cotton-Seed Huller ever offered to the trade. Write for particulars and samples of ground material. Address

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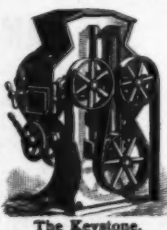
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The J. B. ALLFREE MFG. CO.
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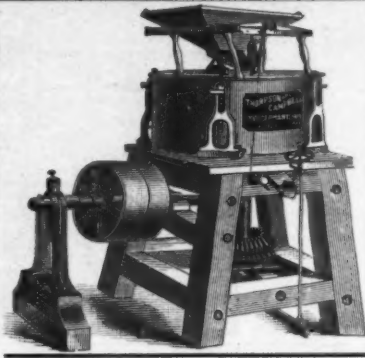
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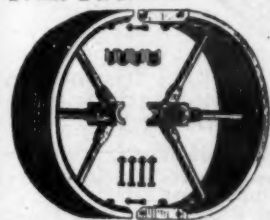
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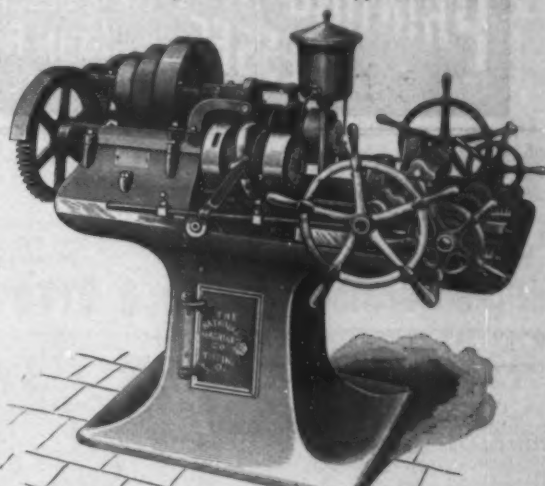
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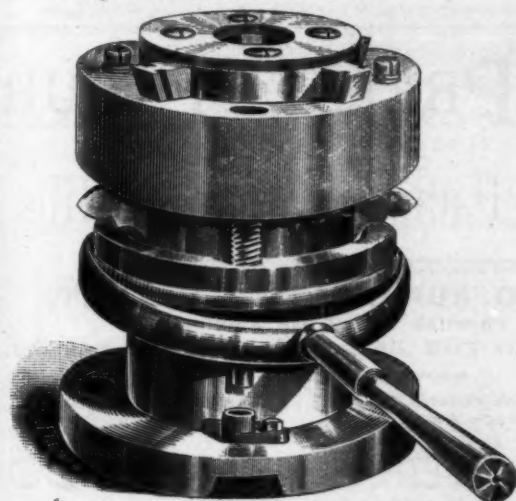
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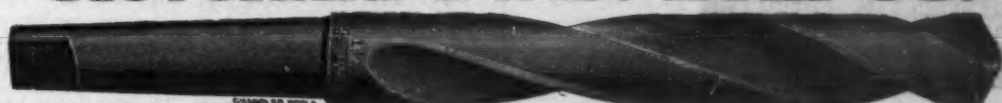
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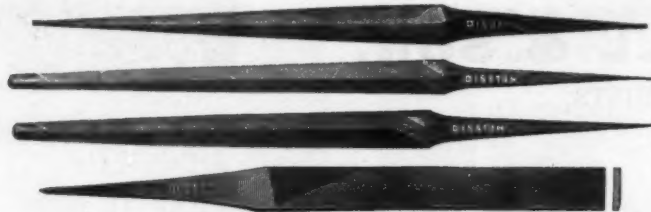
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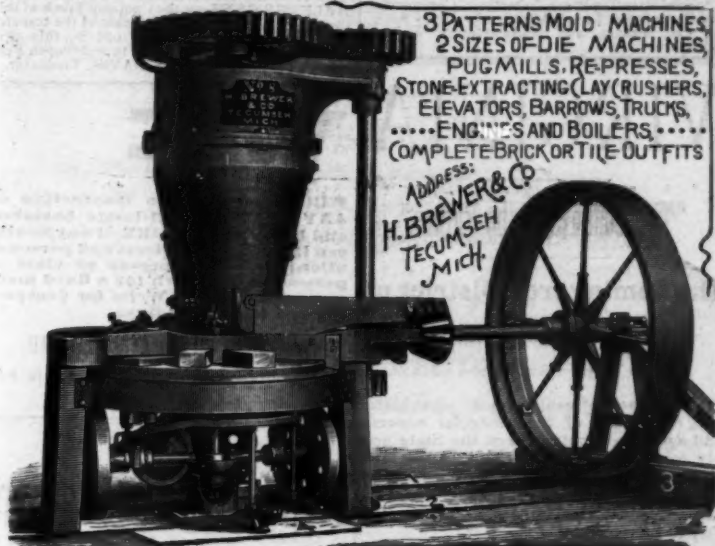
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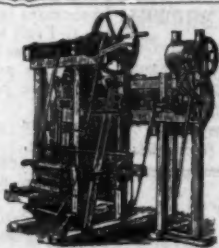
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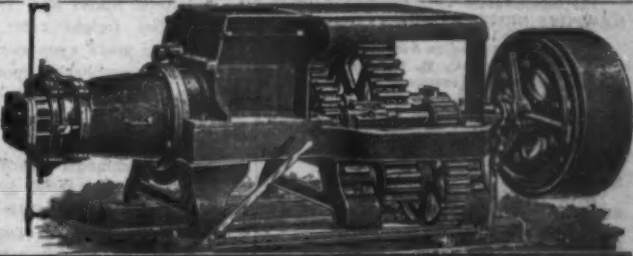
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Roanoke, Va.

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The Jellico Tannery has 25 acres of land, south of and adjoining the Knoxville & Ohio Railroad, which they will deed any part of, or all, to any manufacturing plant, for manufacturing purposes, for one dollar per acre.

B. A. CONNELLY,
JELICO, TENN.

FULTON COLVILLE,

ATTORNEY AND COUNSELLOR AT LAW,

Gate City Bank Building, ATLANTA, GA.

Special attention given Collections, Commercial and Corporation Law. Attorney for Lorry Banking Co., Atlanta, and Manufacturers' Record, Baltimore.

VIRGINIA

"The Bonanza of the Future."

The Coming Iron District of
the United States.

For maps, reference book, pamphlets, etc., descriptive of the wonderful mineral and agricultural resources of the State apply to agents of the Norfolk & Western Railroad, 290 Washington street, Boston; 303 Broadway, New York; 1423 Pennsylvania avenue, Washington, or to General Office, Roanoke, Va.

Manufacturers!

If you are seeking desirable locations, communicate with the undersigned. Special inducements are offered new enterprises in the growing towns along the Baltimore & Ohio Railroad.

Business Men!

Opportunities for the establishment of Profitable Lines of Business are made known on application.

ADDRESS

M. V. RICHARDS.

Land and Immigration Agent Baltimore & Ohio Railroad,

BALTIMORE, MD.



CASH CAPITAL, \$1,000,000.

Employers' and Public
LIABILITY.
Boiler Inspection
AND
INSURANCE.PATENTS
VALIDITY and INFRINGEMENT
SEARCHES A SPECIALTY
DODGE & SONS
WASHINGTON, D. C.

THE NATIONAL CORDAGE CO.

NEW YORK, JANUARY 8, 1892.
The Board of Directors have this day declared the regular quarterly dividend of TWO PER CENT. on the Preferred and TWO AND ONE-HALF PER CENT. on the Common Stock of this Company, payable February 1 next at the transfer office of the Company, 132 Front St., this city. The books will close January 15 and reopen February 2 next. CHARLES DAVIS, Treasurer.

WE

Will undertake the transaction of ANY CLASS of legitimate business, and bring ANY DESIRE of any Southern interest to the direct and personal attention of any person or class of persons in the North for a fixed moderate annual fee. Write for prospectus and terms. Address

SOUTHERN INFORMATION BUREAU,

541 Exchange Building, 53 State St.,
BOSTON, MASS.

TO

Fruit & Vegetable Canners

The cheapest, most efficacious and economical system for putting up high standard goods is the

MUDGE
PATENTED PROCESS

This process consists in the application of steam to the contents of cans or jars in such a manner that all the pressure is downward, and the natural flavors are forced into, instead out of, the fruit, vegetable, or whatever else is to be preserved. The most delicate fruits are preserved without loss of FORM, COLOR or FLAVOR, for any length of time. It can be used to equal advantage for the canning of oysters and shrimps, and for all forms of fish, flesh and fowl.

It is economical as compared with other processes in that it saves

1. Fruit too ripe for transportation.
2. Three handlings, as compared with all other processes.
3. The possibility of loss from fermentation.
4. The necessity of adding artificial coloring.
5. Twenty per cent. in the cost of plant.
6. Ten per cent. over kettle process, because of "swells." Goods prepared by this process command from 15 to 20 per cent. higher prices than any other in the market.

For further particulars address

Mudge Process Fruit Packing Co.

210 E. Lexington St., Baltimore.

Charles F. Mudge, General Manager.

THE BRADSTREET
Mercantile Agency

WAS ESTABLISHED IN 1849.

Is the oldest and financially the strongest organization of its kind, working in one interest and under one management, with more capital invested in the business, and expending more money every year for the collection and dissemination of its information than any similar institution in the world. Its reports are considered in the light of a guide by both investors and those contemplating the granting of credit. In addition to a large corps of skilled employees, more than one hundred thousand correspondents contribute the result of their investigation and opinions. Subscriptions are annual, and may commence at any time the subscriber elects. Details as to prices and terms will be furnished upon application.

CHARLES F. CLARK, President.
Baltimore Office - American Building,
N. KERSHAW, Supt.

THE NEWPORT NEWS BUILDING COMPANY.

Authorized Capital \$500,000.

Shares \$100 Each.

OFFICERS.

A. S. BUFORD, Richmond, Va., PRESIDENT.
JOHN H. MONTAGUE, Richmond, Va., VICE-PRESIDENT.
SAMUEL S. ELAM, Richmond, Va., SECRETARY.
GEORGE A. SCHMELZ, Newport News, Va., TREASURER.
L. P. ROUTH, Richmond, Va., GENERAL AGENT.

BOARD OF DIRECTORS.

A. S. BUFORD, Richmond, Va., ex-President Richmond & Danville Railroad Company.
JOHN H. MONTAGUE, Richmond, Va., President Merchants and Planters' Savings Bank.
E. A. CATLIN, Richmond, Va., President Security Savings Bank.
W. C. SEDDON, Baltimore, Md., of W. C. Seddon & Co., Bankers and Brokers.
HON. GEORGE D. WISE, Richmond, Va., Member of Congress Third Congressional District of Virginia.
GEORGE A. SCHMELZ, Newport News, Va., of Schmeltz Brothers, Bankers.
C. M. BRAXTON, Newport News, Va., Vice President First National Bank.

THE NEWPORT NEWS BUILDING COMPANY.

The Newport News Building Company, duly incorporated under the laws of the State of Virginia, has secured three hundred beautiful residence lots at Newport News for the purpose of erecting buildings thereon and otherwise improving the property.

FINANCIAL PLAN.

The financial plan of the company is as follows:

The capital stock is to be \$500,000, divided into shares of \$100 each.

Under the charter, when \$60 per share shall have been paid on each share of stock, no further assessments will be made, and full-paid certificates will be issued to the holders thereof.

The payments for stock are to be as follows:

\$5 per share upon date of subscription.

\$5 per share in one month.

\$5 per share in two months.

\$5 per share in three months.

\$5 per share in four months.

\$5 per share in six months.

\$5 per share in eight months.

\$5 per share in ten months.

\$5 per share in twelve months.

\$5 per share in fourteen months.

\$5 per share in sixteen months.

\$5 per share in eighteen months.

Building companies doing business upon this plan have paid dividends ranging from 12 to 20 per cent per annum. It is confidently believed that with the superior advantages possessed by this company it can do equally as well.

REDEMPTION OF STOCK.

Stock, when fully paid in accordance with this prospectus, will be received by the company in payment for houses or lots at \$65 per share, being a premium of \$5 per share over cost of same.

BEAUTIFUL LOCATION.

The company's property lies very near Newport News and between Newport News and Hampton.

The Chesapeake & Ohio Railway runs near it, and the electric line connecting Newport News, Hampton and Old Point places it within a few minute's ride of the business centre of the former city. No lot will be over five blocks from the electric line.

Every lot commands a view of Hampton Roads, and it can be honestly said that no property in the Newport News section is more desirable for residence purposes, for it is right in the line of all the valuable and fashionable development which is now attracting so much attention.

WONDERFUL DEVELOPMENT.

When it is remembered that the growth of Newport News is rapid and substantial (it has now a population of about 8,000); that the wages paid here are better than in almost any other city in the country; that the finest dry-dock and ship-building works in the world are here; that a great number of other important industries are in operation, and that others are projected; that a high class of skilled workmen find ready employment, and that such workmen are coming in by hundreds; that one of the greatest trunk lines in the United States has its deep-water terminus here; that northern and foreign capital is pouring into this section by the million, it is not surprising that the real estate business and the building trades are more active here than in any other new city in the country.

DEMAND FOR HOUSES.

A lively demand for new houses and the phenomenal success of building companies are among the causes that brought about the organization of this company.

The property of the company has been secured at a comparatively low figure—prices having been agreed upon before the recent advances in real estate—and it is believed the company will not only make money, but big money. Indeed, no such solid and attractive scheme of this character has been organized in recent times. If the company had a house on every one of its lots to-day there would be tenants or purchasers for all of them.

MONTHLY INSTALLMENTS.

Houses built by the company will be sold upon easy monthly installments or otherwise.

For further information apply to

THE NEWPORT NEWS BUILDING COMPANY,

821 East Main Street, Richmond, Va.

FILL UP the following BLANK and forward, with \$5 per share, to either the Secretary or General Agent at Richmond, Va.

I, _____ of _____

State of _____ do hereby subscribe to

Shares of the Capital Stock of THE NEWPORT NEWS BUILDING CO., on the terms and conditions set forth in the printed Prospectus of said Company, receipt of a copy of which I do hereby acknowledge, and the same is hereby made the basis and a part of this Contract between me and said Company.

This _____ day of _____ 189 _____

Subscriber.

No. of Street _____

GOOD AGENTS WANTED.



N. B.—

OF WINSTON-SALEM,

North Carolina,



IT IS TRUTHFULLY SAID.

"WINSTON-SALEM is the most important manufacturing town in North Carolina."

"SHE has 16,000 people, 114 factories—almost a factory for every hundred people."

"HERE is more activity in real estate, industries and commerce than almost anywhere else in the South."


"THE county is free from debt, and the city, county and school tax is only 66 $\frac{2}{3}$ cents on the hundred dollars—40 per cent. valuation at that."

"MONEY grows here. Capitalists, manufacturers, merchants, builders, farmers—all can find most profitable fields for investment."

"DELAYS are costly. The Hotel Zinzendorf, one of the most magnificent hotels in any small city, will be completed before long; the Roanoke & Southern Railroad will soon be in operation between the twin cities and Roanoke, Va; there will be finished before summer numerous public and business buildings, and all these improvements will inevitably enhance the value of real estate."

"WINSTON-SALEM'S conveniences—paved streets, electric street cars, electric lights, gas, water, sewers, etc.—are as complete as in many cities of ten times the population."

"FOR salubrity of climate, fertility of soil, honesty, frugality, industry and thrift of her people, this section of North Carolina is especially famous."

 You can't well afford to lose sight of this solid, growing town of WINSTON-SALEM. Write the CHAMBER OF COMMERCE here for full particulars, as to advantages for manufactures, plats, prices of real estate, or any other information.

As A LOCATION for Manufactures

Of Iron and Wood and for General Industrial and
Business Enterprises.

FRONT ROYAL, VA.

INVITES INVESTIGATION.

Its location, at the junction of the Norfolk & Western Railroad (Shenandoah Valley line) and the Richmond & Danville's branch, give it excellent transportation facilities. It is only a few hours' ride distant from Washington.

The Norfolk & Western's direct line to Washington will be built from Front Royal.

There is no Finer Agricultural Country in the World than the Famed Shenandoah Valley, in which Front Royal is Located.

A WIDE RIVER WITH SWIFT CURRENT FURNISHES WATER POWER
AND MAKES DRAINAGE PERFECT.

Front Royal is a Prosperous Town, with an Extensive Mercantile Business
and Many Manufacturing Enterprises in Operation and
Under Construction.

INVESTIGATION OF ITS ADVANTAGES IS INVITED BY THE

Front Royal--Riverton Improvement Company,
FRONT ROYAL, VIRGINIA.

The Winston Land & Improvement Company.

Charter granted by Act of Legislature, Session of 1887. Ratified March 4, 1887, Chapter 22.

Authorized Capital, - - \$1,000,000.

Present Capital Stock \$125,000. All Subscribed and Paid Up.

OFFICERS:

G. W. HINSHAW, President, of Hinshaw & Medearis, Wholesale Merchants; Vice-President People's National Bank, Winston, N. C.
DR. W. L. BROWN, Vice-President, of Brown Brothers, Tobacco Manufacturers, Winston, N. C.
W. F. TROGDON, Secretary and Treasurer, North Wilkesboro, N. C.

BOARD OF DIRECTORS:

GEO. W. HINSHAW, Winston, N. C.
MAJ. CHANNING M. BOLTON, Chief Engineer Richmond & Danville Railroad, Washington, D. C.
P. H. HANES, of P. H. Hanes & Co., Tobacco Manufacturers, Winston, N. C.
COL. J. M. WINSTEAD, Cashier Piedmont Bank, Greensboro, N. C., and President H. P. Scales Tobacco Co., Atlanta, Ga.
A. A. FINLEY, ESQ., Mayor of North Wilkesboro, N. C.

ATTORNEYS:

T. B. FINLEY, ESQ., North Wilkesboro, N. C.
HON. C. B. WATSON, Winston, N. C.
HON. J. C. BUXTON, President First National Bank, Winston, N. C.
HON. W. W. BARBER, Wilkesboro, N. C.

THE COMPANY OWNS THE NEW TOWNSITE OF

NORTH WILKESBORO,

NORTH CAROLINA,

Consisting of 1,036 acres, and also owns 4,100 acres of Mineral and Timber Lands in Wilkes County, which property is now being developed. Townsite purchased November 11, 1890. Property put on market at private sale and first lot sold May 12, 1891. North Wilkesboro chartered by the legislature March 4, 1891.

188 Lots sold at Public Auction, December 2, 1891, one fourth of which will be built on at once.

Over sixty buildings already on the townsite.

Already established, one large, handsome, well-furnished and well-kept Hotel; one Saw Mill, Planing Mill, Door and Sash Factory combined; two Saw and Planing Mills; two Brick-yards; one Tan-yard; one Newspaper, the "North Wilkesboro News." Charter was obtained from the last General Assembly for the Bank of North Wilkesboro; the capital stock, \$50,000, has been subscribed, and bank will open for business before March 1st, 1892; fourteen Stores and one large Livery Stable.

Ten miles of streets graded.

Manufacturing sites will be donated and stock subscribed to such legitimate enterprises as may be advantageously located here.

North Wilkesboro, 75 miles west of Winston-Salem, on the Northwestern North Carolina Railroad, is the most important trading point between Winston-Salem and Bristol,

Tenn., and is in the center of the great undeveloped mineral and timber district of Northwestern North Carolina, being by United States postal map, on an air line, 75 miles southeast of Bristol, Tenn., 45 miles east of Cranberry, N. C., 40 miles north of Statesville, 45 miles northeast of Hickory, 90 miles northeast of Asheville, 45 miles southwest of Mt. Airy, N. C., and 80 miles north of Norfolk & Western Railroad, in the Valley of the Yadkin, between the Brushy mountains on the South and Blue Ridge on the north. The best located, watered and drained town in North Carolina.

Her climate is of unsurpassed salubrity and healthfulness. Fresh water and mineral springs abound, and the 328 miles of water courses in Wilkes County furnish a water power of almost incalculable magnitude.

Home seekers, health seekers, and wood and iron manufacturers, will do well to investigate North Wilkesboro's advantages.

PLATS, PRICES AND ANY DESIRED INFORMATION PROMPTLY FURNISHED ON APPLICATION TO

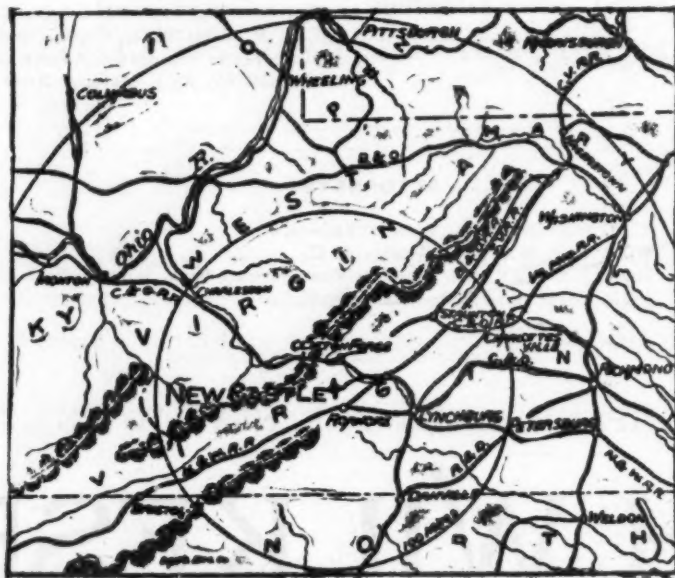
W. F. TROGDON, Secretary and Treasurer,

NORTH WILKESBORO, N. C.

NEW CASTLE, ^{Craig}County, VA.

• THE IRON BONANZA, •

Convenient to Fuel Supply.



*A City of Immense
Possibilities without
a Rival in all that
goes to Create
Wealth and Power.*

*A Home for Invalids
in which to
Lengthen out their
Lives, and for all
to be and Remain
Healthy & Happy.*

PARADISE OF THE HUNTER AND HEALTH SEEKER.

**Future City of the Alleghanies and
Center of Iron Production.**

Commodious Hotel for the Entertainment of Summer Guests.

2,000 TOWN LOTS FOR SALE.

FOR INFORMATION ADDRESS

A. E. HUMPHREYS, Prest., New Castle, Va.

NORFOLK, VA.

THE GREAT SOUTHERN SEAPORT.

Attention of manufacturers and others seeking investment or establishment in the South is called to the following facts:

Norfolk has the most magnificent natural harbor of the Atlantic Coast, having no bar to block its entrance, being within 25 miles of the ocean, sheltered from all vicissitudes of weather, always free from ice, with sufficient depth of water for the deepest draft vessels.

Hampton Roads, at the confluence of the James and Elizabeth rivers with the Chesapeake bay, is easy of access, navigable for vessels of any size or draft.

It has been designated by Congress as the rendezvous for the navies of the world in 1892-'93.

A 26-foot channel, well marked with buoys and light houses, leads to the wharves of Norfolk, and above the city to the Navy-yard.

Seven broad-gauge and two narrow-gauge railroads, controlling an aggregate of over 17,000 miles, put Norfolk in connection with all the points reached by railroads in this country, and two

The water supply is derived from large lakes of spring water seven miles distant, good not only for household use, but admirably adapted for manufacturing purposes, being absolutely free from all these substances that corrode boilers.

The climate, tempered by the proximity of the Gulf Stream, is mild. There is hardly ever ice or snow to interfere with out-door work or exercise.

The city is lighted with electric lights, and has as fine a fire and police department as any in the country.

All denominations are well represented in churches.

There are two good hospitals, one in charge of the Sisters of Charity, and the other under the Protestant organization of the city.

Educational advantages are excellent, there being a thorough system of public schools, together with numerous private seminaries for both sexes.

There are two good theatres, at which the best companies stop on their pilgrimages from the North to the South.

This is one of the largest pine lumber markets in the South: 30,000,000 feet were shipped in 1890.

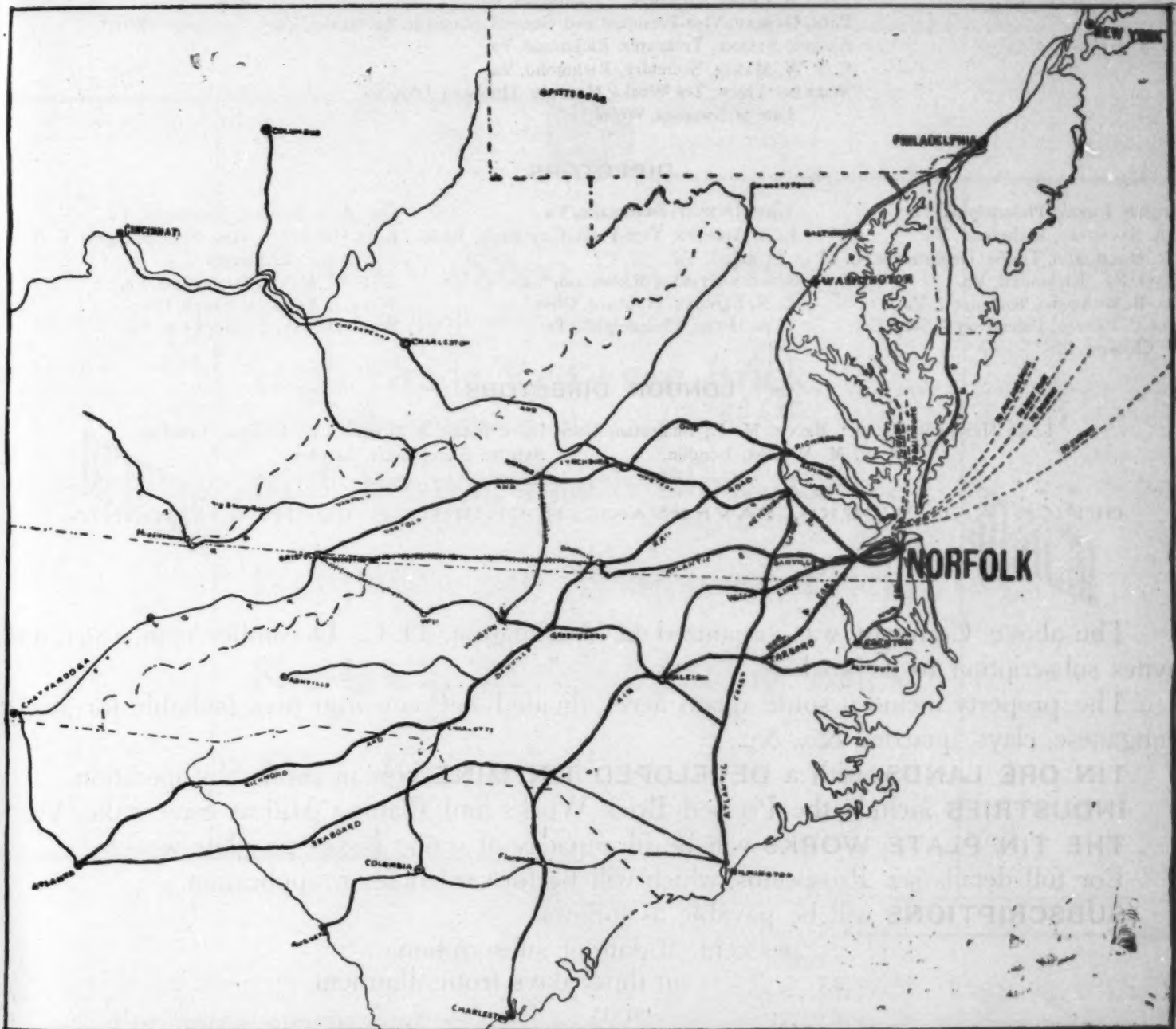
The best bituminous coal and coke are supplied by the C. & O. R. R. and N. & W. R. R.

Pig iron is delivered here by these two railroads.

Roller iron and all of its products can be promptly and cheaply freighted by water to all of the leading seaports.

600,000 bales of cotton are annually marketed here, which makes this the most desirable point for the manufacture of cotton goods in the United States, superior to inland towns throughout the cotton belt, because a factory located in these is dependent on the local product marketed in three or four months, after which it has to draw from distant points or carry a sufficient stock for the year, or if the quality or grade in the locality is unsuitable, it is subjected to the expense of freight from distant points; but Norfolk being a large cotton market, not only furnishes an assortment of grades and quality, but enables the manufacturer to purchase his stock all the year.

It is superior to other seaports from its accessibility to New York, Boston and other markets or such supplies as the manufacturer frequently needs on short notice, while its railroad lines to the interior distribute goods to all points.



canals connect with the Sounds through the Carolinas.

First-class steamship lines ply to Boston, Providence, New York, Philadelphia, Baltimore, Washington, Richmond and other points on the Coast and Sounds.

Norfolk is within 20 hours of Boston by rail and 40 by water.

12 hours of New York by rail and 21 by water.

10 hours of Philadelphia by rail and 18 by water.

8 hours of Baltimore by rail and 12 by water.

7 hours of Washington by rail and 12 by water.

3½ hours of Richmond by rail.

23 hours of Cincinnati, and 34 hours of Chicago and St. Louis by rail.

A regular line of passenger and freight steamships ply to the Brazilian ports, and steamships, chartered mostly for the carriage of freight, ply to Liverpool and other European ports.

In 1883 the aggregate trade of Norfolk was placed at \$58,200,436, while five years later, in 1888, it had risen to \$65,011,456; in 1889 it increased to \$75,000,000, and in 1890 to \$100,000,000. The vessel tonnage of Norfolk in 1870 was 13,503 tons, cargoes valued at \$286,594; in 1880 it increased to 103,608 tons, valued at \$11,116,595; in 1887, 257,884 tons, valued at \$14,714,404; for the year 1890 the tonnage reached 582,846, valued at \$15,197,095.

It will be hard to find a parallel case in this country in two decades showing an increase of tonnage from 13,503 tons in 1870, valued at \$286,594, to 582,846 tons in 1890, valued at \$15,197,095.

The population of Norfolk, including Portsmouth, Berkley and other suburbs, is 70,000; the increase within the city limits has been 61 per cent. in the last ten years.

This increase, with the growth of business and enhancement of value in property of all kinds, is turning the attention of capitalists and investors to this point.

The City of Norfolk has a complete system of sewerage and is well paved.

The healthfulness of the climate, as exhibited by the death rate, is not surpassed by any city in the country, the percentage being in 1890 16.90 to the 1,000.

In addition to the manufacture of cotton and iron, there is at Norfolk opportunity for profitable manufacture of furniture and all articles made of wood, such as ash, oak, pine, poplar, cedar, cypress, juniper, gum, and for the manufacture of safes, stoves, hardware, sash, door and blinds, etc.

The cost of labor ranges from \$1 to \$1.50 per day for unskilled men, and \$2 to \$3 for skilled men; females 50 cents to 75 cents a day unskilled, and 75 cents to \$2 a day for skilled; boys 25 cents to \$1 per day; girls 25 cents to \$1.25 per day.

The above quotations are for white labor.

Unskilled negro labor can be employed at 50 cents to \$1 for men and 30 cents for women.

Norfolk has been exempt from those labor troubles and strikes which have characterized Northern manufacturing cities.

The surrounding country being the great vegetable-growing section of the seaboard, and the rivers and bays being filled with the finest fish and oysters, make living cheap and healthy.

Although in banking facilities Norfolk is fairly well supplied, there being nine banks with an aggregate capital of about \$1,000,000 and aggregate deposits of about \$5,000,000, there is, however, a good opening for another bank.

Norfolk offers a field for the establishment of jobbing houses in dry goods, boots, shoes, hats, caps, notions, drugs, tinware and all other kinds, excepting wholesale groceries, in which she is well supplied.

The country lying to the southward west of Norfolk furnishes the markets to which goods from here are distributed in exchange for cotton, corn, wheat, peanuts and other crops.

The NORFOLK INDUSTRIAL DEVELOPMENT CO. has been organized for the purpose of furnishing information and assisting the establishment of manufacturing enterprises.

Free sites can be obtained on the railroad lines around the city, and reasonable subscriptions will be made to the stock of manufacturing enterprises, provided they are meritorious, but no proposition will be entertained from any but bona fide concerns, using good machinery and stocked on a business-like basis.

Capital invested in machinery is exempted from taxation for ten years, and will probably always continue so.

For further particulars, address

WALTER F. IRVING,

SECRETARY NORFOLK INDUSTRIAL DEVELOPMENT CO.

The Savernake Steel & Tin Plate Co.

OF SAVERNAKE (TRIFORD P. O.), ROCKBRIDGE COUNTY, VIRGINIA.

Capital \$2,000,000.

Shares \$100. Par Value.

OFFICERS.

TITUS S. EMERY, President, Philadelphia, Pa.
THOS. DUNLAP, Vice-President and General Manager, Savernake, Va.
ASHTON STARKE, Treasurer, Richmond, Va.
L. T. W. MARYE, Secretary, Richmond, Va.
WILKINS TRICK, Tin Works Manager, Hubbard, Ohio.
Late of Swansea, Wales.

DIRECTORS.

TITUS S. EMERY, Philadelphia, Pa.	THOS. DUNLAP, Savernake, Va.	COL. A. S. BUFORD, Richmond, Va.
E. A. SAUNDERS, Richmond, Va.	E. B. ADDISON, Vice-Prest. City Bank, Richmond, Va.	E. D. HOTCHKISS, Gen. Freight Agent C. & O. Ry., Richmond, Va.
J. R. MACMURDO, Traffic Department, C. & O. Ry., Richmond, Va.	ASHTON STARKE, Richmond, Va.	L. T. W. MARYE, Richmond, Va.
GEO. B. McADAMS, Richmond, Va.	C. N. CLINGAN, Hubbard, Ohio.	WILKINS TRICK, Hubbard, Ohio.
JOHN C. PARKES, Bates Iron & Steel Co., Chicago, Ill.	T. A. HICKS, Philadelphia, Pa.	W. C. DICKEY, Philadelphia, Pa.

LONDON DIRECTORS.

LORD HENRY BRUDENELL BRUCE, M. P., Chairman, Loch Laird Estate & Mineral Co., Limited, London.
C. W. M. WILSON, London. SAMUEL SADDINGTON, London.

OFFICE AND WORKS, SAVERNAKE, ROCKBRIDGE COUNTY, VIRGINIA.

The above Company was organized at Washington, D. C., December 17th, 1891, and invites subscription to its stock.

The property includes some 9,000 acres, divided between iron ores (suitable for steel), manganese, clays, quarries, &c., &c.

TIN ORE LANDS with a **DEVELOPED TIN MINE** now in profitable operation.

INDUSTRIES include the Pressed Brick Works and Planing Mill at Savernake, Va.

THE TIN PLATE WORKS will be of capacity of 3,600 boxes tin plate weekly.

For full details see Prospectus, which will be forwarded upon application.

SUBSCRIPTIONS will be payable as follows:

25	per cent.	at date of subscription.
25	"	in thirty days from allotment.
25	"	" sixty " " "
25	"	" ninety " " "

The Company reserves the right to reject any subscriptions.

A discount of five per cent. will be made for subscriptions paid in full in cash on receipt of notice of allotment.

Subscriptions may be sent to the Treasurer, ASHTON STARKE, ESQ., Richmond, Va. For foreign subscriptions to C. W. M. WILSON, ESQ., 153 Fenchurch Street, London, or SADDINGTON & Co., 30 Lime Street, London, and all inquiries for further information, to the office of the Company, addressing:

THE SAVERNAKE STEEL & TIN PLATE CO.

Savernake, Triford P. O., Rockbridge Co., Va.

THE

Savernake Pressed Brick Co.

SAVERNAKE, VA.

THOS. DUNLAP, PRESIDENT, SAVERNAKE, VA.

S. N. LETCHER, SECRETARY, LEXINGTON, VA.



Capacity 40,000 Brick daily,

On hand or to order,

High-Grade Red-Face Brick,

Ornamental or plain,

Buff, Brown, Peach Blow, Gray,

Pompeiiian and Manganese Brick,

Fire-brick, Vitrified Paving Brick,

Tiles, Etc., Etc.




For prices, samples and testimonials as to quality and beauty, address

THE SAVERNAKE PRESSED BRICK CO.

Triford P. O.,

ROCKBRIDGE COUNTY, VA.

 Above grades of Brick delivered at Chicago, Boston, New York or Philadelphia at favorable prices and rates.

EDWARD F. POWERS,
President.

JOHN M. BROOKS,
Manager.

MIDDLESBOROUGH

Is located in Bell County, Kentucky, near the junction of the three States of Virginia, Kentucky and Tennessee with the Cumberland Mountain at a point where that mountain is most heavily freighted with its precious stores of Coking Coals, Iron Ores and Limestone.

It is 1,080 feet above sea-level. Its limits extend virtually from Cumberland Gap westward six miles, with a width of three and a-half to four miles north and south.

Through the tunnel at Cumberland Gap, towards which all railways for this region converge, communication is established with the seaboard and the entire system of railway and water transportation in America. Middlesborough also enjoys Postal, Telegraph, Express, Banking and Insurance Facilities with all the business world.

MANUFACTURERS AND INVESTORS

Are invited to make a thorough investigation of the MINERAL AND TIMBER RESOURCES of

MIDDLESBOROUGH, KY.

For in the origin and development of the town the primary cardinal points why a town should be built exist here to a pre-eminent degree

Middlesborough occupies a POSITION second to none in the United States as regard coal and iron.

The Natural Resources are in such wonderful profusion and are so easy of development that it is only a question of time when a great Industrial and Manufacturing city will surely be built to consume the great Mineral and Timber Wealth which nature has deposited here with such a prodigal hand.

There are already built:

Two Large Iron Furnaces,
An Immense Steel Plant,
A Mammoth Tannery (in operation),
A Brewery, Cold-Storage and Ice Manufacturing Plant,

A Belt Railroad, 23 miles long,
Water Works, Electric-Light Plant,
Foundries, Saw Mills, Planing Mills,
Furniture and Bent Wood Factories,
Telephone and Electric Street Car Systems

And other smaller plants of various descriptions.

THE MIDDLESBOROUGH TOWN LANDS COMPANY,

MIDDLESBOROUGH, KY.

Address all communications to the Manager.

OF INTEREST TO INVESTORS.

An Investment in **FLORIDA PHOSPHATE MINING**, Offering a CONSERVATIVE INVESTMENT Combined with an Unparalleled Opportunity for PROFITS.

THE LA PIERRE PHOSPHATE COMPANY,

of BOSTON, MASS., and TALLAHASSEE, FLA.

On account of the unexpected demand for the PREFERRED STOCK of this Company, occasioned by the liberal inducement previously offered, all sales made on and after November 28th, 1891, will be upon the following terms only, and not as heretofore advertised:

FOR A SHORT TIME ONLY, the Company offers for sale a limited amount of its Preferred Stock at ONE HUNDRED AND FIFTY DOLLARS per share, giving as a bonus with each share sold TWO SHARES OF COMMON STOCK, with the sole restriction that such Common Stock shall be surrendered to the Company at any time within one year from date of original purchase, upon tender by the Company of ONE HUNDRED DOLLARS PER SHARE.

CAPITAL \$1,500,000, full-paid, divided as follows:

\$500,000 8 per cent. Preferred Stock; \$100—par.

\$1,000,000 Common Stock; \$100—par.

PROSPECTUS.

ORGANIZATION.

The Company has been organized under the personal supervision of the well-known law firm, Balch & Rackemann, Counselors and Conveyancers, of Boston, and Mr. John W. Weed, of New York, a well-known Attorney. Mr. E. C. Mudge, the President of the company, is a man of unquestioned executive ability and experience, having successfully established systems of water works in many of the prominent cities and towns of New England. He has also recently refused a flattering offer to take charge of the construction of a proposed railroad in order to give his entire attention to the development of the company's property. He is now located at the mines where he will devote his time to the interest of the company. Mr. F. E. Owen, the Treasurer, formerly connected with the Boston Post Publishing Co., which position he resigned to accept the Treasurership of this company, is well-known among his large circle of business acquaintances as a man of strict integrity and large experience in financial and business affairs.

The titles to the property are perfect, and the property is absolutely owned by the company, being entirely clear and free from all encumbrance with the exception of \$300,000 7 per cent. ten year Gold Bonds, which have all been placed; the entire proceeds being devoted to the purchase of the property.

PROPERTY.

The property owned by this Company is situated in Leon County, Florida, two and one-half miles west of Tallahassee on the Florida Central & Peninsular Railway, three-quarters of a mile north of the railway. A railway in course of construction, the Gainesville & Tallahassee, will pass directly through the property if given the right of way. The Florida Central & Peninsular Railway has a branch which puts the property within seventeen miles of tidewater at St. Marks, Florida, and other railways are in contemplation. The property consists of sixteen hundred and sixty-nine acres of upland in one body, about one and three-quarters miles long by three-quarters of a mile wide. It is nearly all cleared, and in good condition for agricultural purposes.

PHOSPHATE DEPOSIT.

The Phosphate Deposit, as indicated by pits and borings, is one-half of a mile wide, and extends throughout the entire length of the property. There are now three open pits or shafts on the property, two in the middle, about one thousand feet apart, across the width of the deposit, and one three-quarters of a mile northwest of these, near the northwest end of the property. These shafts are six feet square, and go to a depth of sixty feet. There have been also at least fifty borings made in all parts of the deposit, which show in a general way the following deposit of phosphate of lime:

The First Stratum, called purple rock, is seven and one-half feet from the surface. This stratum is 17 feet thick. It is a low grade, averaging about 55 per cent. Bone Phosphate of Lime without washing or separation. It requires separation to eliminate the sand, thus making a high-grade phosphate of about 72 per cent. This is not regarded at present as being of great value. Below this stratum is found white sand seven feet thick, and then fire-clay, available for all purposes that such material is used for, four feet thick.

Second Stratum is a soft Phosphate 4 feet thick, of a high-grade, running about 73 per cent. Bone Phosphate of Lime. Immediately below this is the

Third Stratum of granulated Bone Phosphate, analyzing about 55 per cent. Bone Phosphate of Lime crude, and 70 per cent. washed. This is a wonderful deposit, being already ground by nature, and can be used as a fertilizer just as it is taken from the earth. Next below this is the

Fourth Stratum of fine Hard Rock Phosphate, 12½ feet thick, and analyzing over 75 per cent. Bone Phosphate of Lime crude, with only 55-100 of 1 per cent. oxide of iron, and 25-100 of 1 per cent. alumina. This is the finest and principal stratum, having, as further compensation for its depth, greater uniformity in quality and the absence of pockets, showing a reliable and continuous stratum throughout.

AMOUNT OF PHOSPHATE.

The amount of phosphate on this property is practically unlimited, having been estimated by Prof. Lawrence C. Johnson, of the U. S. Geological Survey, who has personally investigated this property, as being between 60,000,000 and 100,000,000 tons, including all grades. There is no water to interfere with working, all being above the fire-clay, or practically surface water.

ESTIMATED PROFIT.

The present price for high-grade phosphate on the English market is 11d., or 22 cents per unit or per centum per ton, or for 70 per cent. grade, the price would be \$15.40 per ton. Allowing 50 per cent. of this value for cost of mining, handling, transportation, insurance, brokerage, etc., which is liberal in the extreme, leaves a net profit of about \$7.70 per ton.

This does not include the granulated or ground bone phosphate stratum of the same surface dimensions, but eight feet thick; nor the upper stratum, which is 17 feet thick. The expense of mining the phosphate is certainly less than mining coal, as there is no blasting, or water to contend

with, and has never been estimated to exceed 50 cents per ton, and the practical working of other well-known companies shows this estimate to be conservative.

INCOME ANNUALLY.

With our three separate sets of hoisting machinery, each with its own boiler and appurtenances, and capable of lifting 3,000 pounds per trip, one hundred tons of phosphate is a very low estimated output daily for each shaft; in fact, two hundred tons per day per shaft may be considered fairly reasonable. Assuming, however, that 300 tons per diem are mined and sold at a net profit of \$7.50 per ton, produces an income of \$2,250 per diem, or for 300 days \$675,000 net, which leaves 8 per cent. on the \$500,000 preferred stock, and over 58 per cent. on the common stock. This is not, in any sense, excessive estimation, and can be borne out in fact by reference to other companies not as favorably located, nor possessing such a large amount of high-grade phosphate.

MARKET FOR PRODUCT.

The demand for high-grade phosphate is practically unlimited, not only in the United States, but throughout the continent of Europe, phosphoric acid being the basis of all vegetable growth, and the main constituent of all fertilizers. The world's consumption of phosphate, which must be an indispensable article of commerce until that probably distant day when the chemist shall manufacture in the laboratory what the agriculturist now grows in the field, is rated at 1,500,000 tons, and increases annually at the rate of 25 per cent. or 30 per cent. In five years 4,500,000 tons will be required, and in twelve years 12,000,000 or more will be required to supply the market for the season. Since the abandonment of the Canadian fields there remains the product of the States of South Carolina and Florida as the chief sources of the world's supply, and with South Carolina rock averaging about 57 per cent. bone phosphate, and costing some \$3.00 per ton to mine, as against 70 per cent. to 80 per cent. bone phosphate, and a cost of only 50 cents per ton to mine in Florida, it will not be long before the latter State will maintain absolute supremacy, if, in fact, she does not hold it to day.

QUALITY OF LA PIERRE ROCK.

In relation to the quality and grade of phosphate produced by the La Pierre Phosphate Company, Messrs. Stillwell & Gladding, chemists to the New York Produce Exchange, and, doubtless, among the highest authorities as phosphate chemists, state the following, over their signature, and after a careful analysis of our product:

"We have no hesitation in pronouncing this phosphate a high-grade article of the highest commercial and manufacturing excellence. Very truly,

STILLWELL & GLADDING."

BENEFITS OF FERTILIZERS.

It is estimated that the introduction of phosphatic manures has increased the product of cotton in the South from 4,000,000 to about 8,000,000 bales. The increased yield of an acre sowed with wheat, and properly dressed with fertilizers, has been phenomenal, more than doubling the bushels per acre, and in some instances many fold.

TRANSPORTATION FACILITIES.

The Florida Central & Peninsular Railway Co. are affording this company every facility they can for the cheap transportation of the phosphate, and have erected large store-houses and elevators at Fernandina, Florida, for the ready handling of same for shipment to foreign and domestic markets. Two other roads are now being constructed to reach this property, thus guaranteeing competitive rates. Direct shipments can be made from Tallahassee to all parts of the United States and Europe, and the facilities are all that could be desired.

FACTS AND PROSPECTS.

With such an enormous tract as this company possesses, situated within three miles of the capital of the State; within one mile of a trunk line railway, and with a spur track connection; with two other railways striving to compete for business; with a large quantity of high-grade phosphate for the foreign market, and a large amount of medium-grade for the American market; with every facility for mining at a remarkably low price; with no expensive pumping to contend with; with an enormous profit for the product, the demand for phosphates, in the present methods of high agriculture, increasing more rapidly than the supply; and with honest management, there would seem to be nothing wanted to ensure immediate and complete success, rendering the stock of the company not only very valuable, but commanding a premium for generations to come.

LA PIERRE PHOSPHATE COMPANY,

Incorporated under laws of West Virginia.

B. C. MUDGE, President.

F. E. OWEN, Secretary and Treasurer.

BOSTON OFFICE, 738 EXCHANGE BUILDING.

THE OLD COLONY TRUST COMPANY, of Boston, whose statement we append below, is Trustee for Bondholders and Transfer Agent for the Stockholders.

STATEMENT—AUGUST 1, 1891.

Assets.		Liabilities.	
Loans.....	\$3,529,399 47	Capital Stock.....	\$1,000,000 00
City and other Bonds at or under par.....	389,295 19	Surplus.....	500,000 00
Deposit Vauls.....	62,714 35	Undivided Profits and Interest.....	112,588 70
Expenses Paid.....	11,918 93	State Tax.....	11,000 00
Cash on hand.....	210,419 97	Deposits.....	3,542,576 52
Cash in Bank.....	962,417 31		
	<u>\$5,166,165 22</u>		<u>\$5,166,165 22</u>

APPLICATIONS FOR STOCK OR FOR INFORMATION CONCERNING THE PHOSPHATE COMPANY SHOULD BE ADDRESSED TO THE TREASURER

The Markets.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, January 27, 1892.

It is rather disappointing to be obliged to chronicle no improvement in the iron and steel trades as yet. It is impossible to assign any reasons that will explain the dullness. Large buyers themselves are unable to say more than that they are not yet ready or willing to buy. Nothing would make them both ready and willing so quickly as an advance in prices. Mr. Swank's figures of production show for last year 8,279,870 tons, a decrease over the previous year of 922,833 tons, most of which decrease was made in the first half of the year; during the last half a general rush was made in iron production, and the figures reached the unprecedented ones of 4,911,763 tons. The stocks of iron on hand the first of January were 596,333 tons, against 608,921 tons a year before. The increase in stocks during the last half of the year was 154,338 tons. At the present time production seems to be at a standstill, although from the reports of furnaces blowing in it would appear that an increase will be made before long. It is impossible to state with any degree of certainty whether an increase will take place, because of the sometimes unexpected blowing out of furnaces. Prices continue low. Very little heavy buying is reported in any of the markets. Vigorous efforts have been made, and with considerable success, at several Southern points, and it is reported within a day or two that three or four furnaces in the South will soon close some of their heaviest contracts of the season with parties in the Ohio valley and the Northwest. A good many pig-iron makers have become weary of waiting for an upward tendency, and are more inclined than they have been to accept the situation and sell their output for the next three or six months. Tidewater quotations for No. 1 foundry continue at \$17.50 to \$18; No. 2, \$16.50; Southern brands from 50 cents to \$1 per ton less. There is only a moderate degree of activity in the New England and Middle States. Some improvement is noted in Northwestern markets. While Southern makers are not satisfied with their market in the Northwest, they have no particular reason to complain. A sharp competition, of course, exists between the South and those who have been heretofore virtually controlling Western markets. Heavy purchases of ore have already been made, amounting to between three and four million tons. It is quite probable that all the large producers will cover their season's requirements within the next week or two. Two or three companies have already virtually contracted for the bulk of their requirements for the season. Ores have advanced from 30 to 50 cents per ton. A further advance in freight rates is said to be probable; the present one amounts to 25 cents per ton. This is the first genuine improvement in the entire iron trade, but it is an improvement which has been anticipated and fully discounted. What the market now wants and awaits with anxiety is an improvement in foundry and forge iron. The bar mills throughout the country are working in a half-and-half sort of way. Within the past week or two large contracts for box cars have been placed. This will no doubt help the merchant-bar trade. Throughout the Ohio valley there are symptoms of improvement. New York markets are rather dull. Bridge and steel-rail requirements are being presented there,

but buyers are not urgent. Barbed wire is likely to improve. Coke is low in price at all points. The anthracite coal trade is not active.

HARDWARE.

Orders are being placed more freely than for some time past, and travelers are meeting with a fair trade. Merchants are buying only for present wants; consequently orders are small but frequent, indicating a healthy condition. There have been very few changes in prices, and further declines are said to be not probable, owing to the stiffening in the iron market. Some are of the opinion that heavy goods are likely to advance. The chain manufacturers who have been selling at prices below the cost of production have withdrawn all quotations, and in some cases are quoting at an advance of 10 per cent.

IRON AND BRASS FOUNDERS.

HAIGHT & CLARK,

Albany, N. Y.

Fine Gray Iron, Brass and Bronze Castings. Send samples for estimate. Nickel, Brass and Bronze Plating. Agents for the GOETZ BOX ANCHORS and POST CAPS.

HARDY & UNDERWOOD,



26 Furnaces Within Telephone Call.

BIRMINGHAM, ALA.

SALASEE PLASTERING FIBER.

Superior to Hair in all respects and costs less.

"This fiber was used exclusively in the building of the TAMPA BAY HOTEL CO., because it made better work than any article offered in any market."—J. A. WOOD, Architect, 151 Broadway, New York. Address, LADUMIS MFG. CO., Fernandina, Fla.

ACME CEMENT PLASTERING

You can have a wall on your house as hard as portland cement at lime mortar prices. Estimates furnished for work at any point.

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2345-45 CALLOWHILL ST.,

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Teal Portable Hoist.

SWING and BRIDGE

CRANES

OVERHEAD TRACK,
SWITCHES, Etc.

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Manfrs. of and Dealers in

Machine Set
Cap Screws.

SPECIAL TAPS AND DIES.

COLD-PUNCHED NUTS.

All kinds of Turned, Milled and
Stamped Work in Metal.

CINCINNATI, OHIO.

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ECLIPSE RAWHIDE AND TANNED LACING.

Manufactured by HENRY POPHAM & SON, East Newark, N. J.

IMPORTERS OF ENGLISH PICKER LEATHER.

We Guarantee DIXON'S BELT DRESSING to Prevent Slipping and Preserve the Leather. Send for Circular and Testimonials. JOS. DIXON CRUCIBLE CO., Jersey City, N. J.



Southern Agents.—L. M. Rumsey Mfg. Co., St. Louis, Mo.; Smith-Courtney Co., Richmond, Va.; Atlanta Rubber Co., Atlanta, Ga.; Baker, Sloo & Co., New Orleans, La.

LEVIATHAN BELTING

Positively Unequalled for Strength, Durability and Traction Power; Unaffected by Heat, Steam or Water.

BELTS FOR MAIN DRIVING AND WORK OF A HEAVY NATURE.

SOLE MANUFACTURERS,

MAIN BELTING CO.

1219-1235 Carpenter St., PHILADELPHIA.

946 Randolph St., CHICAGO.

120 Pearl Street, BOSTON.

Send for Price-Lists and Samples

The Only Manufacturers of Raw Hide Belting in the Country.

The Chicago Rawhide Mfg. Co.

—MANUFACTURERS OF—

RAWHIDE BELTING, LACE LEATHER,

ROPE, LARIATS, FLY-NETS,

Picker Leather, Stock and Farm Whips, Washers, Hame Straps, Hame Strings, Halters and other Rawhide Goods of all kinds, by Krueger's Patent.

This Belting and Lace Leather is not affected by steam or dampness; has more grip than any other; never becomes hard; is stronger, more durable and the most economical Belting made. Especially adapted for the Southern trade on account of its resistance to moisture. The Rawhide Rope for Round Belting Transmission is SUPERIOR TO ALL OTHERS.

72 and 78 OHIO STREET, CHICAGO, ILL.

THE BEST & CHEAPEST

IN THE WORLD

STITCHED CANVAS BELTING

THE CHESAPEAKE BELTING CO. BALTIMORE, MD.

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IT BELTS THE EARTH AND MAKES THE MOON SPIN LIKE A TOP

SHULTZ PATENT FULLED LEATHER BELTING

ALL LEATHER. NO IRON ROD OR HINGE. OLD STYLE LEATHER LINK AND IRON ROD BELTS AND ROPE TRANSMISSION SUPERIOR.

OUR BELTING IS TANNED ON THE SURFACES ONLY. INTERIOR IS RAWHIDE. THE ONLY PERFECT BELT MADE. NO SLIPPING OR LOST MOTION.

SAVE YOUR POWER. YOUR BELTS. YOUR MONEY. BY COVERING YOUR PULLEYS WITH SHULTZ PATENT LEATHER PULLEY COVERING.

RAWHIDE LACE LEATHER AND PICKER LEATHER.

ST. LOUIS, MO.

IRON MARKETS.

[Special Cor. MANUFACTURERS' RECORD.]

BIRMINGHAM, ALA., Jan. 23, 1892.

The movement of iron this week has been light and the furnaces have stacked iron. Furnace men still believe in better prices and will not offer anything under quotations, but bids close to quoted figures will receive more consideration this week than last.

The reported increase in stocks for December of 60,000 tons is not more than the average increase for that month, and the furnace men claim that this accumulation does not represent more than the result of the stopping of mills and foundries during the holidays, and that total stock unsold is more than 100,000 tons smaller than a year ago.

The coal trade continues unusually active and the demand keeps fully up to the production.

The export demand now takes, via Pensacola alone, 8,000 to 9,000 tons per month for Mexican, Central American and West Indian ports, and is increasing steadily. We have no figures at hand to show the movement via Mobile, but will report them later. The South American and West Indian ports consume more than 2,000,000 tons per annum, most of which is supplied by England, at prices ranging from \$7.00 to \$14.50 per ton. The business of supplying this demand naturally belongs to this coal field and will eventually be secured by it.

The reciprocal trade relations with South and Central America which Mr. Blaine's policy has inaugurated will confer greater direct benefit on this district than any other portion of the country, and it does not require a prophet to foretell an era of such prosperity for this section, in which the Gulf ports will share, as will astonish the world in the next ten years.

We quote f. o. b. cars Birmingham:

PIG IRON.	
No. 1 Foundry.....	\$12.00
No. 2 ".....	11.00
No. 3 ".....	10.00
No. 1 Soft.....	11.00
No. 2 ".....	10.00
No. 1 C.....	12.00
No. 2 ".....	11.00
Gray Forge.....	9.75
Mottled.....	9.25

HARDY & UNDERWOOD.

CINCINNATI, January 23, 1892.

There is not a new feature to report in the pig-iron market. Some interest is shown in the heavy purchases of Lake Superior ores just closed by Carnegie, Illinois Steel Co. and other steel makers. If the facts are correctly reported it means an enhancement of cost of Bessemer pig next season about 75 cents per ton. Ore men

are holding firm to an equivalent advance on ores for foundry and forge irons. The problem presented, therefore, to the furnacemen is about this: If pig iron can be sold at just about cost of production on the present market, how much can be made on it when cost is increased 75 cents per ton by advance in ores? There is no doubt whatever that lake rates will be materially higher the early part of the season than for the corresponding time last year. The only possible way, therefore, for cost of materials to remain as they are is for the ore men to materially reduce their last year's prices. It is known that last year's prices barely paid the leading companies for the cost of raising and handling the ore, and the same companies are determined this year to leave their ore in the ground if they cannot get a slight margin of profit.

While these conditions, which seem imperative, confront the trade, there is, nevertheless, no movement anywhere that indicates belief in higher prices later on. Transactions closed during the last week have been for deliveries running six or eight months ahead and at current prices. The inquiry has been lighter than a week ago, and the whole temper of the trade is summed up in the word "hesitation."

All past history of the trade has shown that when prices are at or below cost, nearly all parties view the future with apathy and will take no chances. When prices are up several dollars per ton, the average buyer is disposed to buy beyond his wants and contract far ahead. The conditions are very puzzling, and surprises may be in store for those who believe that pig iron will always be sold at cost or under.

We quote for cash f. o. b. cars Cincinnati:

Southern coke No. 1 foundry.....	\$14.75	\$15.25
Southern coke No. 2 foundry and		
No. 1 soft.....	13.75	14.25
Hanging Rock coke No. 1.....	16.50	17.00
Hanging Rock charcoal No. 1.....	19.75	21.00
Tennessee charcoal No. 1.....	17.00	17.50
Jackson Co. stone coal No. 1.....	16.50	17.00
Southern coke, gray forge.....	12.50	12.75
Southern coke, mottled.....	12.25	12.50
Standard Alabama C. W.....	19.00	20.00
Tennessee C. W.....	18.00	19.00
Lake Superior C. W.....	19.50	20.50

CHICAGO, January 23, 1892.

As the month progresses business is keeping at about the usual volume for this period of the year. There has been considerable activity in coke irons, especially among Northern brands. Competition among makers of this class of metal is very strong. Each contract of size is being vigorously contested, and in many cases concessions have been made for desirable business.

On Southern cokes a number of consumers are in the market inquiring for

deliveries during the entire year of 1892. Difficulty is being encountered in finding furnaces willing to make current figures to run over so long a period. Sales of Southern coke are for the most part being restricted to July or August as limit. The desire to contract for metal of this class so far ahead proves that many buyers are satisfied that prices have reached their lowest stage, and that they will be wise to cover their requirements for the next 12 months if they can do so at current prices.

Consumption is going steadily along. Outlook in all directions is healthy, in many respects decidedly encouraging, but it is conceded that there is likely to be no material change in market prices so long as stocks continue to show a steady increase, as is the case at present.

Lake Superior charcoal irons are for the most part inactive. Growing disposition is noticed on the part of manufacturers of this class of iron to hold for short deliveries unless better prices can be obtained, a certainty that prices on ore will be higher coming season than last, in addition to other conditions, making this course necessary.

We quote for cash f. o. b. Chicago:

Southern Coke No. 2 foundry.....	\$15.25	\$16.00
No. 2 soft.....	14.50	15.25
Lake Superior charcoal, Nos. 1-4.....	17.25	18.50

BOSTON, January 23, 1892.

There is little change to report in the outlook here, though buyers show more disposition to feel the market. Any special lots at low prices are quickly snapped up, but otherwise there has been only the usual run of carload orders.

We quote for cash f. o. b. Boston:

Standard Alabama 1X Strong.....	\$17.00	\$17.50
" " 2X ".....	16.00	16.50
" " 1 Soft.....	16.00	16.50
" " 2 ".....	15.25	15.75
Niagara (Strong L. S. Coke Iron) 1X.....	18.75	

ST. LOUIS, January 23, 1892.

The iron market here does not present any unusual features this week. There has been a fair number of orders placed and enquiry for prices continue to come in. The outlook for a large business this year

is very good. We hear of sales of Southern No. 2 soft on basis of \$10 Birmingham, and some parties claim to have bought for less. Gray forge is being offered in round lots at \$9.75 cash Birmingham for prompt shipment.

The car works in this territory are pretty well filled with orders for cars, which indicate that their business will be much larger than it was last year.

We quote for cash f. o. b. St. Louis:

Southern Coke No. 1 Foundry.....	\$15.25	\$15.50
No. 2 ".....	14.50	14.75
No. 3 ".....	13.75	14.00
Gray Forge.....	13.00	13.25
Charcoal No. 1.....	17.00	17.50
No. 2.....	16.50	16.75
Missouri Charcoal No. 1.....	15.50	16.00
No. 2.....	15.00	15.50
Ohio Softeners.....	18.00	19.00
Lake Superior Car Wheel.....	19.50	20.00
Southern ".....	19.50	20.00
Prick's Connellsville Foundry Coke.....	15.00	15.50

BUFFALO, January 23, 1892.

A continued improvement in demand is noted this week, without any noticeable change in prices. Locally the demand is of the "hand-to-mouth" character, but at points further east and west there is a disposition to place contracts for several months' delivery.

We quote for cash f. o. b. Buffalo:

No. 1 X Fdy., Strong, Coke Iron, Lake		
Superior ore.....	\$16.00	\$16.50
No. 2 X Fdy., Strong, Coke Iron, Lake		
Superior ore.....	15.00	15.50
Ohio Strong Softener No. 1.....	18.00	18.50
Jackson County Silvery No. 1.....	18.00	18.50
Lake Superior Charcoal.....	18.00	18.50
Tennessee Charcoal.....	18.00	18.50
Southern Strong No. 1.....	16.75	
Southern Soft No. 1.....	15.75	
Alabama Car Wheel.....	19.75	20.00
Hanging Rock Charcoal.....	21.00	22.00

ROGERS, BROWN & CO.

CATALOGUE D, 1891-92, is a book of nearly 200 pages, containing full illustrations and descriptions of contractors' tools and machinery, brick plants, rolling-mill machinery, etc., issued by Thomas Carlin's Sons, of Allegheny, Pa. This firm has recently made additions to its plant, and, with better shipping facilities, is prepared to accommodate an increased demand for the wide range of machinery handled, including stationary and hoisting engines, stationary and marine boilers, contractors' machinery and tools, grinding and mixing pans, shears, punches, etc. Their new catalogue will be mailed upon application.

AUTOMATIC INCANDESCENT DYNAMOS

ELECTRIC MOTORS

(Stationary and Railway.)

MAYO TYPE

DYNAMOS are absolutely self-regulating, and specially adapted to isolated plants. MOTORS are iron-clad. No external magnetism. Highest efficiency.

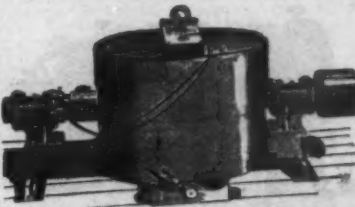
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AGENTS WANTED.

ROCKFORD ELECTRIC MFG. CO.

ROCKFORD, ILL.

Repairs, Rewinding Armatures, &c., a specialty.



MOTOR (IRON-CLAD TYPE.)

♦ ELECTRIC CAR TRUCK. ♦

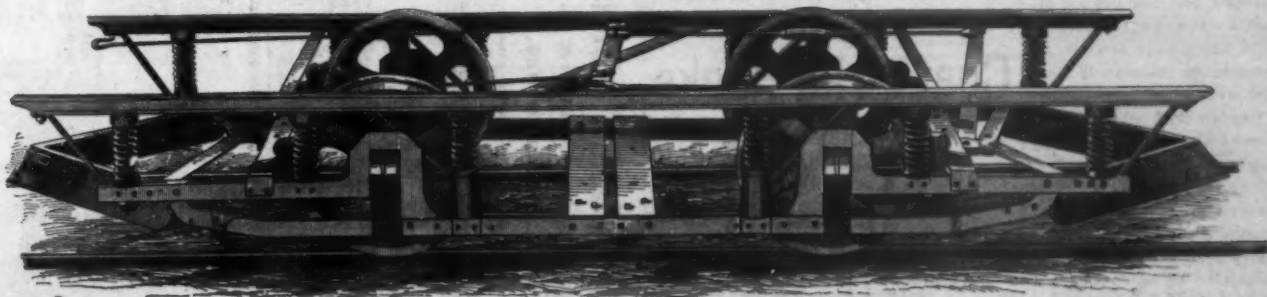
ALL-STEEL!

NON-OSCILLATING!

TWELVE SPRINGS!

POWERFUL BRAKE!

SIMPLICITY!



Send for Blue Prints and Photographs.

ROBINSON MACHINE CO.

Altoona, Pa.

Eastern Lumber Markets

[Special Cor. MANUFACTURERS' RECORD.]

NEW YORK, January 26, 1892.

It takes very little to start a flutter in the lumber market, notwithstanding the apparently secure conditions as regards supply and demand. There is a great deal of talk concerning Canadian lumber, the probability of increasing imports, the probability of changes in tariff rates and the possibility of a large increase in shipments from the fir-lumber districts of the Pacific coast when certain transportation facilities now contemplated are established; and then there is a good deal of talk of heavier shipments of lumber products from the Southern States. Yet, after all, we know full well that the shipments from those States and from elsewhere must be determined by the demand, and by nothing else.

There is quite a stir throughout the country as to organization. The Sash & Door Salesmen's Association has effected a permanent organization at Minneapolis. The manufacturers of sash and doors are discouraged at the present indications, and apprehend another season of very low prices, because of the heavy stocks. The spirit of organization is very strong at Chicago and other points in the West, but it is not at all likely that prices or competition will be materially affected. Reference is made to these points in the West because of their probable influence on the East. The strongest and most encouraging feature in the entire lumber market, whether East or West, is that a good deal of inquiry is being made for lumber for the coming season. What it means is rather difficult to say. There is not much heavy buying as yet, because buyers do not know whether it is safe to do so. Both soft and hard woods are favorably effected by inquiries now coming in.

Coming nearer home, we find conditions quite favorable along the Lake ports. At Buffalo and Rochester prices are firm. At Albany there are no concessions heard of; if any must be made, they will be made later on in the year. The condition of hardwood trade is favorable, although there is not very much doing. Some of our wholesalers are endeavoring to ascertain in an approximate way what the condition of stocks is in the hands of manufacturers and mill men. We have generally understood that stocks are heavy, but this fact has been contradicted, and the contradiction is true as regards a good many manufacturers and dealers in the West, who were credited with having much larger stocks than they are now found to have. The hardwood market in the West has been strengthened, we learn, by inquiries from wholesalers in the East and from large Western centers, such as Chicago. These inquiries may not result in much business, but they are calculated to strengthen the confidence of manufacturers. Another effect of this is to prevent consignments of lumber to scalpers; there is less anxiety to do this, and less necessity. Quartered and common oak are offered in a moderate way and at full autumn prices. Poplar is being held at very firm figures by the association interests in Tennessee. Cabinet stuff is not very active, because of the freedom with which buyers supplied requirements late last fall. Cherry is moving along in the same rut; a good cherry will sell quickly and bring a good price. Maple flooring is being used quite freely in and around the city. All indications point, as they have pointed all along, to a heavy consumption of hardwoods, but in a retail and not a wholesale way—that is to say, wholesalers are not willing to anticipate next summer's hardwood requirements by additional purchases. They have been earnestly solicited to buy by parties in the West, and have not availed themselves of the opportunities presented.

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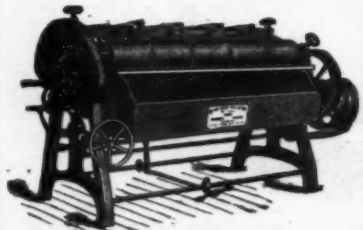
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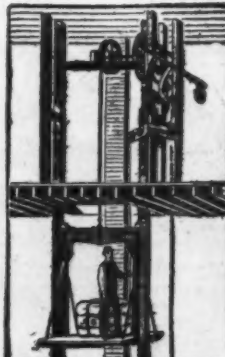
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CHANGE OF LOCATION.—The Cortright Metal Roofing Co., with main office and factory at Philadelphia, Pa., informs the public that its Western office, which is now located in Kansas City, Mo., will be removed to Chicago, Ill., about February 1. A part of the Exchange Building, No. 134 Van Buren street, corner Pacific avenue, has been leased, and communications so addressed will receive prompt attention. A large and complete stock of metal tiles, metal slates, new ornamental shingles and roofing sundries will be kept on hand at Chicago to supply promptly the growing Western demand for these goods. Any one handling or using roofing material will be interested in the company's latest catalogue.

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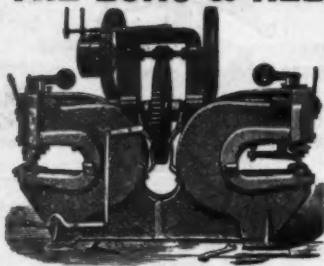
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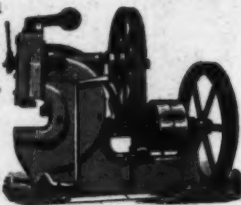


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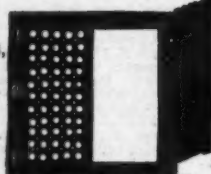
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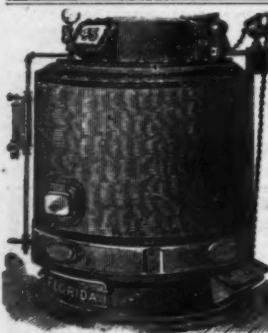
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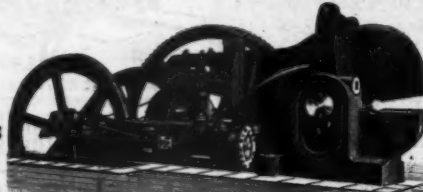
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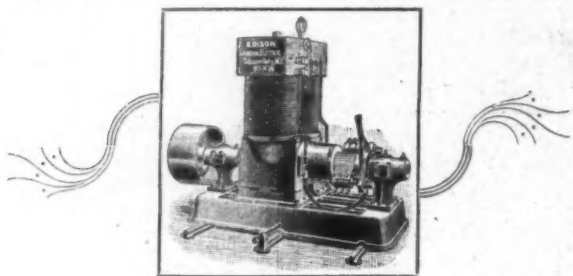
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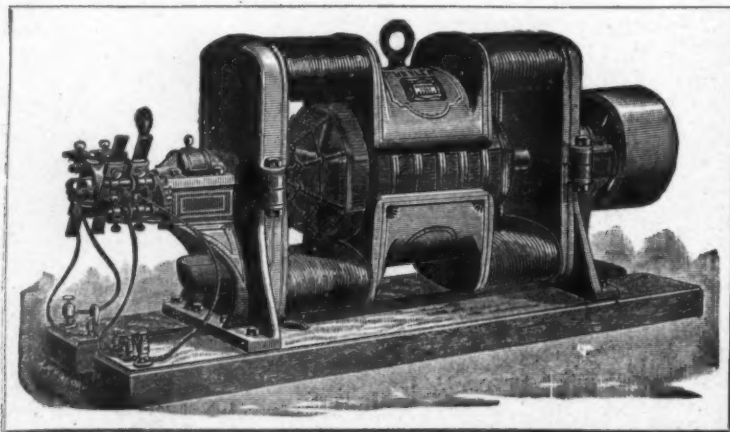
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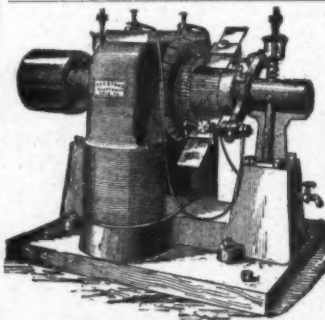
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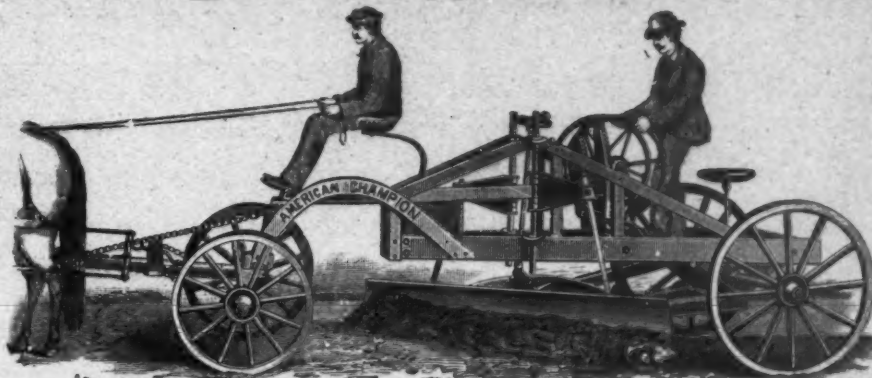
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10 in. x 5 ft. bed Engine Lathe, ft. motion.	New.
8 in. x 4 ft. bed Screw Cut'g Lathe.	"
8 in. Speed Lathe, foot motion.	New.
20 in. Drill Press.	"
24 in. Drill Press.	"
75 horse-power water tube boiler, second hand.	"
25 " " vertical	" " "
12 " " vertical	" " "
8 " " locomotive	" " "
18 " " vertical	new.
9 " " "	" " "
7 " " "	" " "
6 " " "	" " "
5 " " "	" " "
4 " " "	" " "
6 " " "	engine
8 " " "	" " "
10 " " "	" " "
30 " " horizontal	" " "
1 1/2 " " "Lawson" gas	second hand.
14x16 Automatic Engine, 100 horse-power.	New.
12x14 " " "	"
8x11 " " "	"
8x10 " " "	"
Steam Pump, capacity 600 gallons per hour, or- dinary speed, second hand.	"
Eclipse Steam Pump, 4x2 1/2 in., new.	"
" " " 8x3 1/2 in.,	"
" " " 8x10 in.,	"
" " " 12 1/2 x 18 in.,	"
" " " 18x12x24 in.,	"

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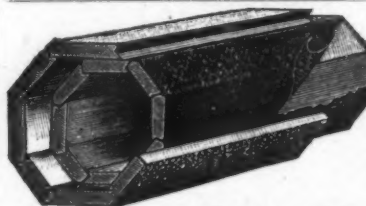
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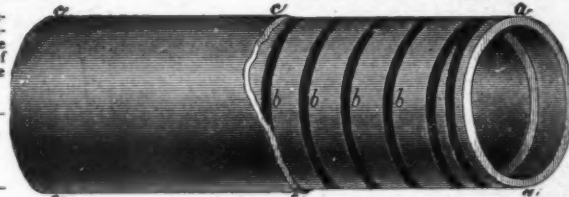
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